APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

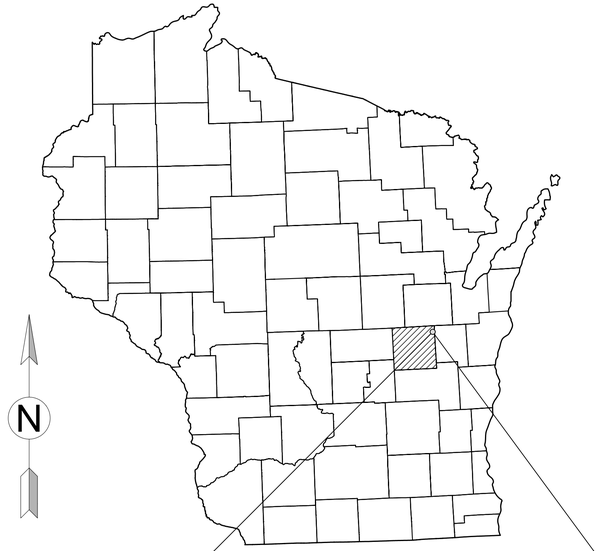
DRAFT SET NOT FOR CONSTRUCTION
Print Date:
3/15/2019 7:33:49 AM

60% DESIGN

MENASHA LOCK ELECTRIC FISH BARRIER

Menasha, Wisconsin

LOCATION: 44° 14'10.2" LATITUDE, -88° 27'38.4" LONGITUDE



WISCONSIN
NOT TO SCALE

PROJECT LOCATION
90 BROAD STREET MENASHA, WISCONSIN 54952
NOT TO SCALE

GENERAL NOTES:

1. THESE DRAWINGS ARE FOR THE CONSTRUCTION OF AN ELECTRIC FISH BARRIER AT THE MENASHA LOCK, WISCONSIN.
2. DIMENSIONS & ELEVATIONS ON THESE DRAWINGS ARE TAKEN FROM DATA SUPPLIED BY OMNNI ASSOCIATES. (920-735-6900). VERIFY ALL DIMENSIONS & ELEVATIONS WITH ACTUAL SITE CONDITIONS.
3. ALL CONCRETE COMPONENTS SHALL BE CAST FROM INSULCRETE, UNLESS NOTED OTHERWISE.
4. 4,000 PSI CONCRETE IS PERMITTED WHERE NOTED.
5. INSULCRETE CONCRETE IS SPECIALLY FORMULATED TO PROVIDE THE NECESSARY ELECTRICAL INSULATION FOR THE BARRIER. THE SPECIFICATION FOR INSULCRETE WILL BE PROVIDED BY SMITH-ROOT IN SEPARATE DOCUMENTS. THERE MUST BE NO STEEL REINFORCING WITHIN OR THROUGH THE INSULCRETE EXCEPT WHERE SPECIFICALLY SHOWN. ANY REINFORCING SUPPORTS, CHAIRS, AND TIES (NO STEEL WIRE TIES) MUST BE MADE FROM PVC OR SIMILAR NON-CONDUCTIVE MATERIAL. ALL CONCRETE SHALL BE CONSTRUCTED WITH INSULCRETE (UNLESS SHOWN OTHERWISE).
6. ELECTRODE MATERIAL SHALL BE MILD STEEL GRADE A36. ANY SPLICES SHALL BE WELDED FULL PENETRATION WITH MATERIAL OF SIMILAR COMPOSITION, AND GROUND SMOOTH.
7. GLASS FIBER REINFORCEMENT (GFRP) SHALL COMPLY WITH THE FOLLOWING

   #6 GFRP(GLASS FIBER) REINFORCEMENT SHALL BE PULTRUDED FIBERGLASS MATERIAL AS FOLLOWS:

GUARANTEED DESIGN TENSILE STRENGTH		90,000 PSI
NOMINAL TENSILE MODULUS		5,700,000 PSI
NOMINAL CROSS SECTIONAL AREA	3/4 " DIA	0.44 SQ. IN

8. STEEL REINFORCEMENT SHALL BE GRADE 60.
9. BARS SHALL NOT BE WELDED UNLESS AUTHORIZED. WHEN AUTHORIZED, CONFORM TO ACI 301,SEC. 3.2.2.2. "WELDING" AND PROVIDE ASTM A706, GRADE 60 REINFORCEMENT.
10. REINFORCEMENT LAP SPLICE LENGTHS SHALL COMPLY WITH THE FOLLOWING TABLE, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS:

BAR SIZE	#3	#4	#5	#6
BARS IN SLABS & ELSEWHERE	22"	28"	36"	42"

    (1) BARS SHOWN TO BE CONTINUOUS SHALL BE LAPPED AS SCHEDULED ABOVE IN STRAIGHT RUNS AND AROUND CORNERS.

11. ALL REBAR SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH ACI DETAILING MANUAL 315.
12. CONDUIT SHALL BE PVC SCH. 40 (UNLESS NOTED OTHERWISE), DIAMETERS AS SHOWN ON THE BUILDING PAD PLAN, ALL JOINTS GLUED AND SEALED, SWEEPING L RADIUS BENDS.
13. COVER TO FRP AND STEEL REINFORCEMENT SHALL BE 2" TYP. (UNLESS SHOWN OTHERWISE)
14. ALL MATERIALS SHOWN ON THESE DRAWINGS, INCLUDING ELECTRICAL WIRING FROM ELECTRODES TO THE PULSATOR CABINETS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
15. SMITH-ROOT WILL PROVIDE SITE ASSISTANCE AS SET FORTH IN THE CONTRACT.
16. THE OWNER MUST ARRANGE FOR SMITH-ROOT INSPECTION OF THE FORMS AND REBAR IN ACCORDANCE WITH CONTRACT.
17. TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS" (FHWA 2009).
18. ALL SITE SERVICES TO BE LOCATED PRIOR TO EARTHWORK.
19. ALL EARTHWORK ON THIS DRAWING IS BASED ON GEOTECHNICAL ENGINEERING PROVIDED BY OMNNI ASSOCIATES (920-735-6900). COORDINATE WITH OMNNI ASSOCIATES, AS REQUIRED.
20. DESIGN ICE THICKNESS THROUGH BARRIER IS 24".

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G-130 PROPOSED SITE LAYOUT
G-140 PROPOSED UTILITY LAYOUT
G-150 PROPOSED FENCING & SIGNAGE PLAN
G-160 PROPOSED CONSTRUCTION LIMITS & ACCESS PLAN

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C-210 PLAN AND PROFILE
C-220 PAVEMENT AND EROSION CONTROL PLAN
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A-400 NEW TOILET BUILDING PLAN AND ELEVATIONS
A-410 EXISTING CONTROL BUILDING PLAN AND DETAILS

SURVEY COMPLETED BY:

CONTACT: OMNNI ASSOCIATES
PHONE NUMBER: 920-735-6900

CIVIL ENGINEERING:

CONTACT: SMITH-ROOT INC.
PHONE NUMBER: 360-573-0202

STRUCTURAL ENGINEERING:

CONTACT: APTUM INC.
PHONE NUMBER: 360-216-4086

GEOTECHNICAL ENGINEERING:

COMPLETED BY: OMNNI ASSOCIATES
PHONE NUMBER: 920-735-6900
REPORT:
XXXxxxXXXxxx
XXXxxxXXXxxx
XXXxxxXXXxxx
XXXxxxXXXxxx

PERMITS:

ALL REQUIRED PERMITS SHALL BE PROPERLY DISPLAYED AND IN HAND PRIOR TO START OF CONSTRUCTION.

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

ISSUE DATE 03/14/2019
ENGINEER MBD
Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

CLIENT
FOX RIVER NAVIGATIONAL SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
COVER SHEET

G-100

P:\0045-003_SRI_MENASHALOCK\04_CAD\SHEETS\G-100 COVER SHEET.DWG

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DESIGNER	SLMc
JOB NUMBER	

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1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
SPECIFICATIONS /
GENERAL NOTES

G-110

P:\0045-003_SRI_MENASHALOCK\04_CAD\SHEETS\G-110 SPECIFICATIONS.DWG

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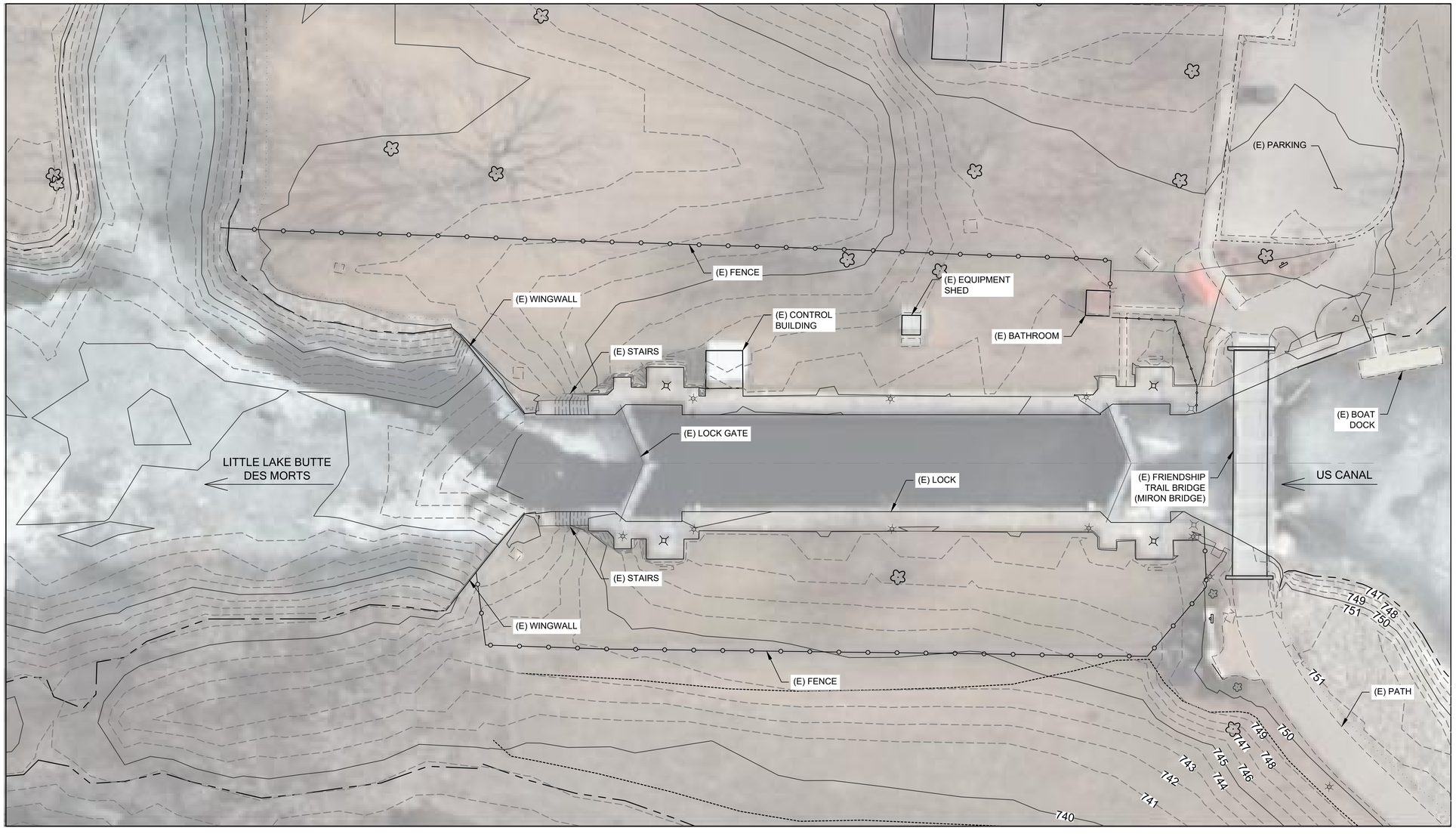

N

EXISTING SITE LAYOUT
SEE BAR SCALE

0" 10' 20' 40'
SCALE: 1" = 20'

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REVISION

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Q.C. CHECK	JK
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CLIENT
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KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
EXISTING SITE LAYOUT

G-120

P:\0045-003_SRI_MENASHA\DOCKH_CADD\SHEETS\G-120 EXISTING SITE.DWG

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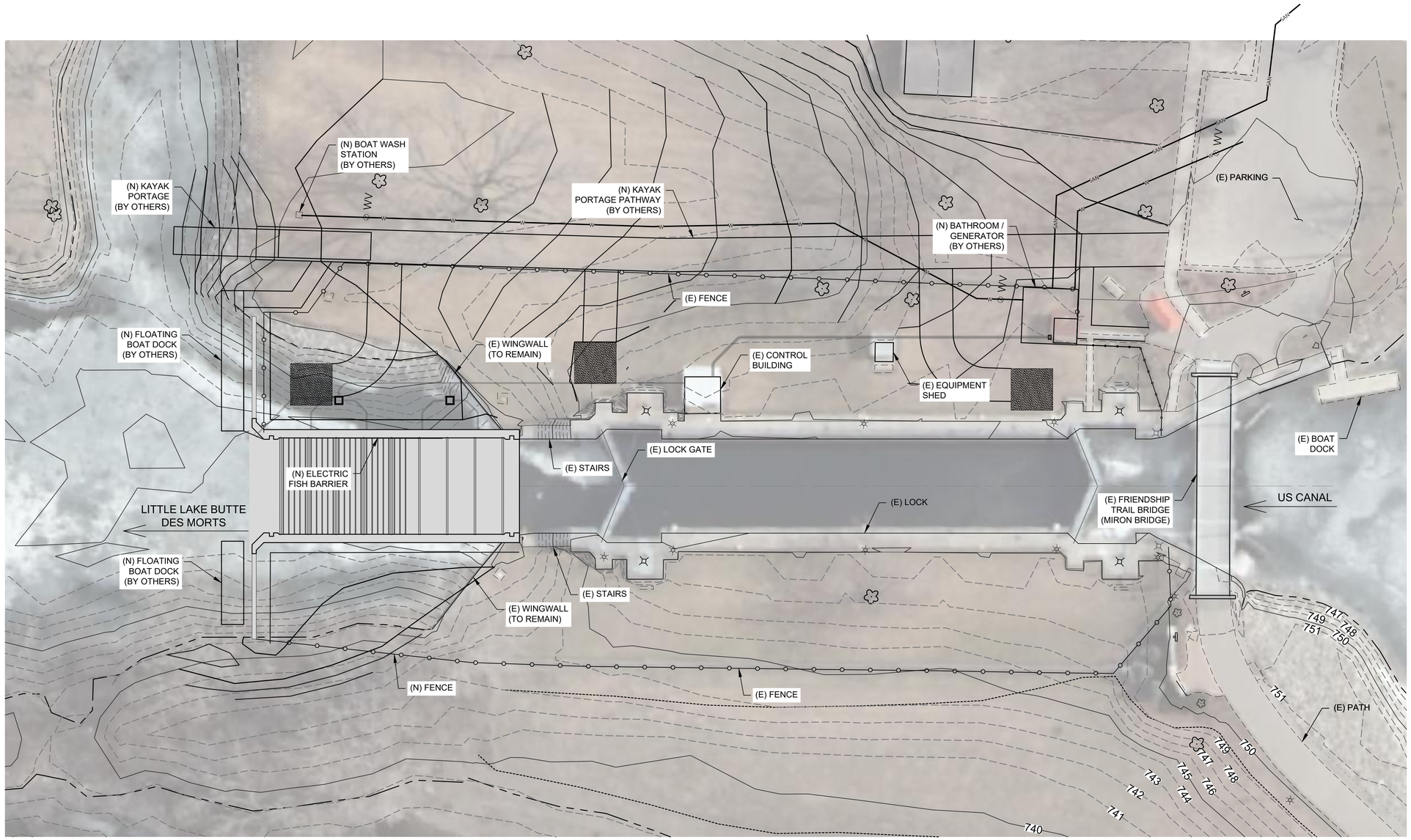

N

PROPOSED SITE LAYOUT
SEE BAR SCALE

0" 10' 20' 40'
SCALE: 1" = 20'

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16603 NE 50th AVE.
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REVISION

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1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
PROPOSED SITE LAYOUT

G-130

P:\0045-003_SRI_MENASHALOCKGA_CADD\SHEETS\G-130 PROPOSED SITE LAYOUT.DWG

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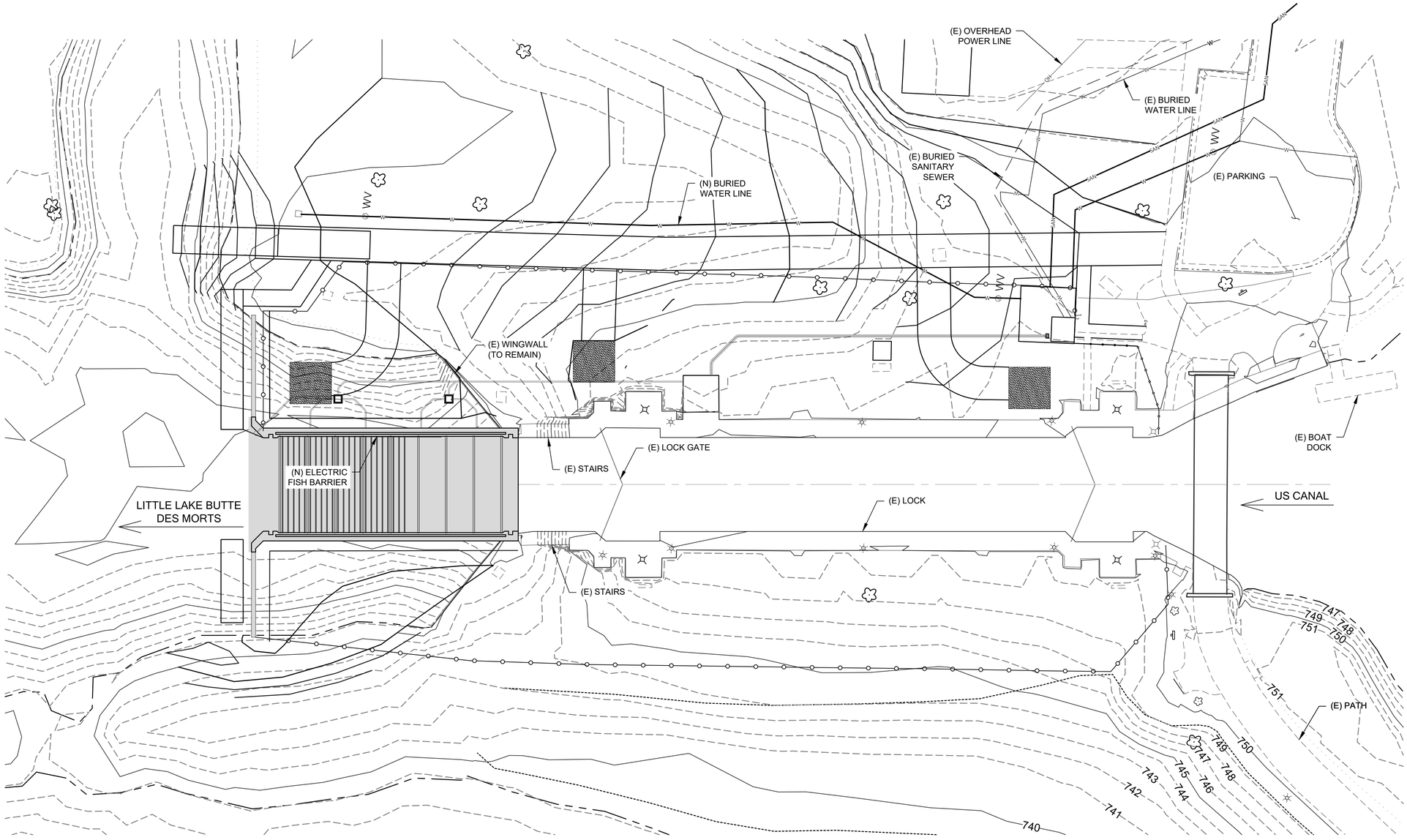

PROPOSED UTILITY LAYOUT
SEE BAR SCALE

0" 10' 20' 40'
SCALE: 1" = 20'

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VANCOUVER, WA. 98686
(360) 573-0202

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JOB NUMBER	

CLIENT
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1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
PROPOSED UTILITY LAYOUT

G-140

P:\2045-003_SRI_MENASHALOCK\04_CAD\SHEETS\G-140 PROPOSED UTILITY LAYOUT.DWG

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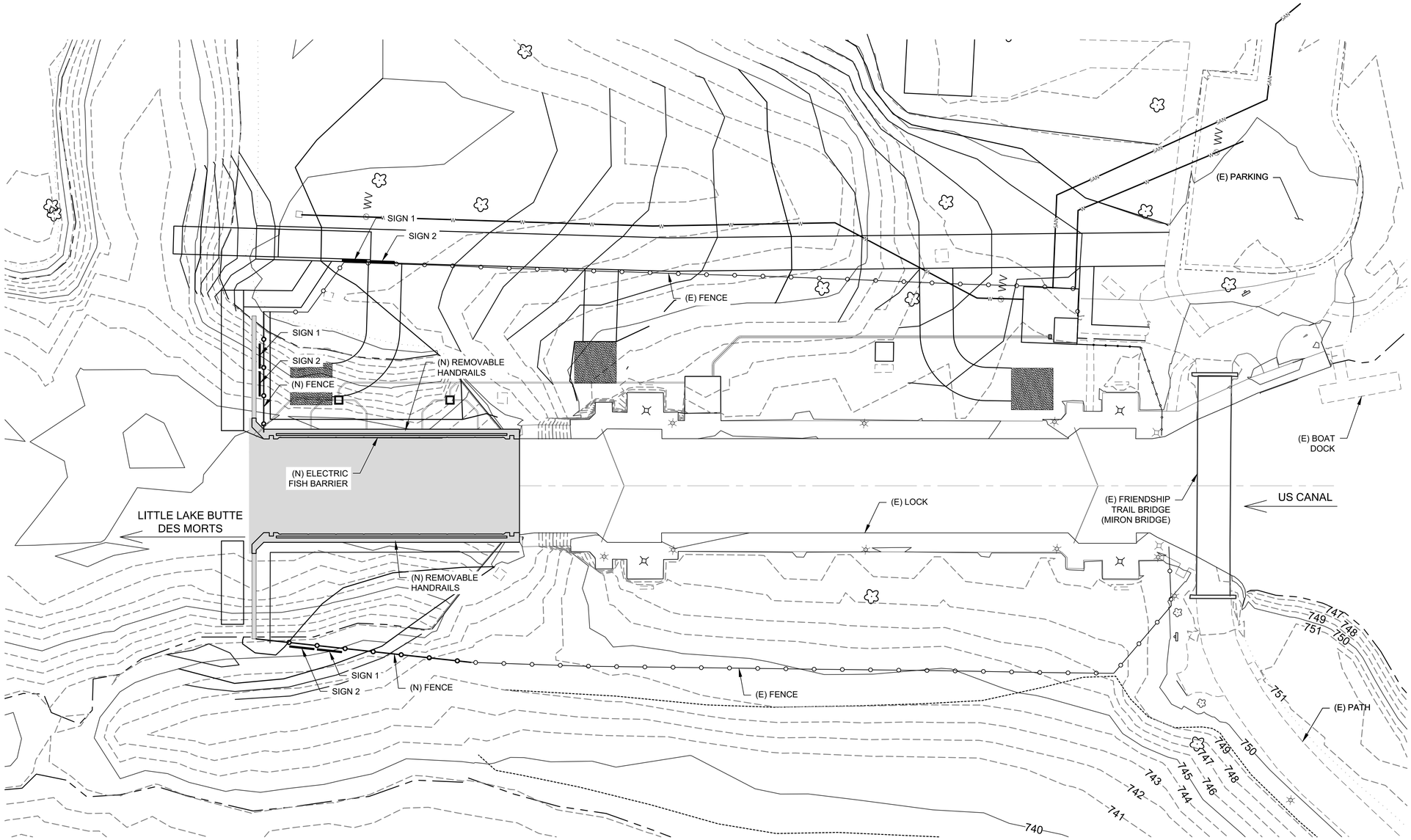

SIGN #1

NO TRESPASSING

SIGN #2

N

PROPOSED FENCING AND SIGNAGE PLAN
SEE BAR SCALE

0" 10' 20' 40'
SCALE: 1" = 20'

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

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DESIGNER	SLMc
JOB NUMBER	

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1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
PROPOSED FENCING AND SIGNAGE PLAN

G-150

P:\0045-003_SRI_MENASHALOCK\04_CADD\SHEETS\G-150 PROPOSED FENCING AND SIGNAGE.DWG

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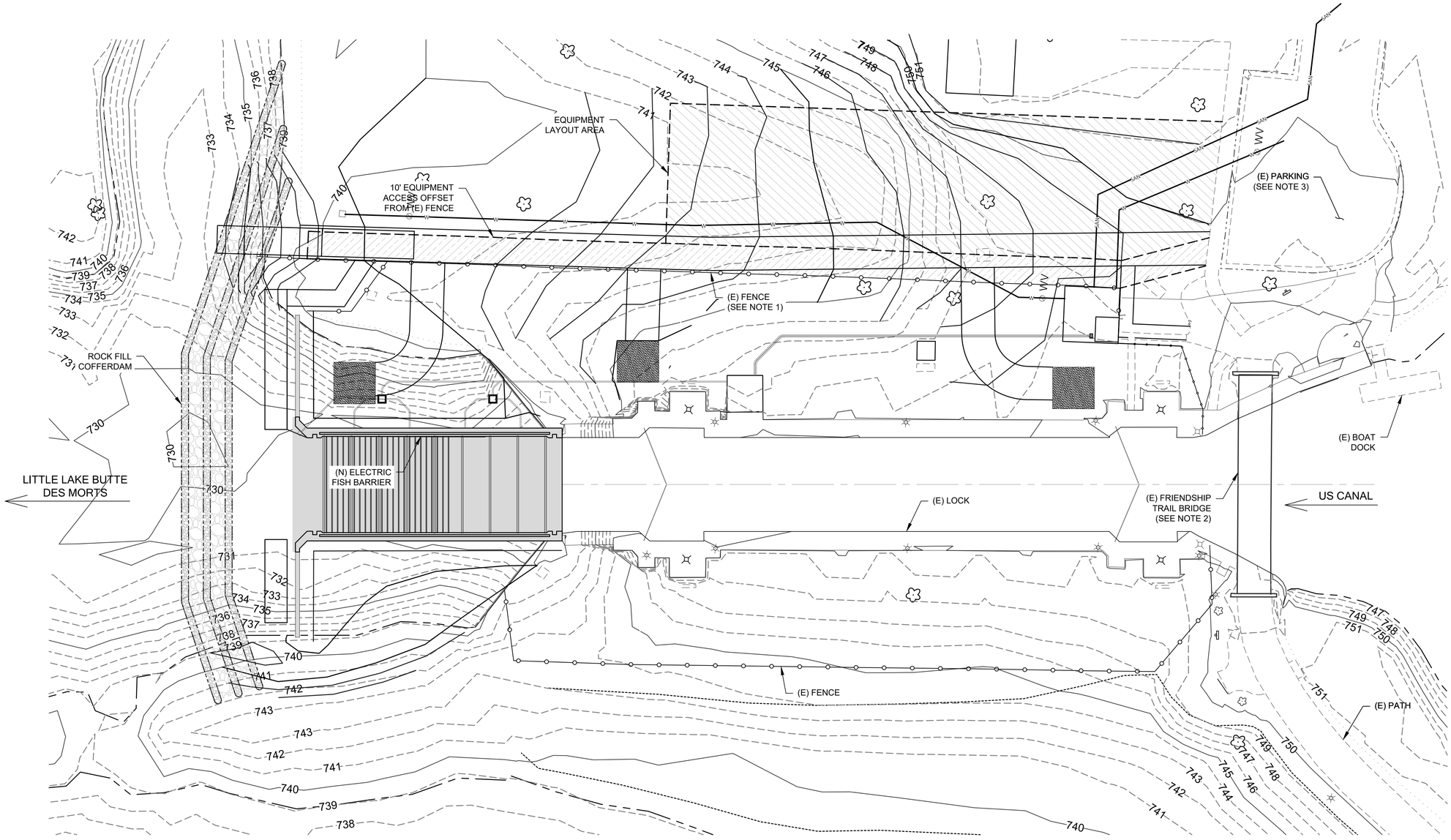

NOTES:

1. TEMPORARILY REMOVE AND PROTECT EXISTING FENCE, AS NEEDED.
2. NO EQUIPMENT ACCESS ACROSS FRIENDSHIP TRAIL BRIDGE.
3. MAINTAIN PARKING SPACES FOR PUBLIC ACCESS.

N

PROPOSED CONSTRUCTION LIMITS & ACCESS PLAN

SEE BAR SCALE

0" 10' 20' 40'

SCALE: 1" = 20'

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

ISSUE DATE	03/14/2019
ENGINEER	MBD
Q.C. CHECK	JK
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JOB NUMBER	

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1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
PROPOSED CONSTRUCTION LIMITS AND ACCESS PLAN

G-160

P:\2045-003_SRI_MENASHALOCK\04_CAD\SHEETS\G-160 PROPOSED CONSTRUCTION LIMITS.DWG

LEGEND:

- MAG SPIKE SET
- CONTOURS
- 1" IRON PIPE FOUND
- MONUMENT FOUND
- SOIL BORINGS
- SPOT ELEVATION
- BENCHMARKS
- SANITARY MANHOLES
- ROUND STORM INLET
- RECTANGLE STORM INLET
- POWER POLE
- GUY WIRE
- LIGHT POLE
- PEDESTAL
- STREET SIGN
- C CONCRETE
- HYDRANT
- —X— FENCE
- —W— WATER UTILITY
- —E— ELECTRIC UTILITY
- —FO— FIBER OPTIC
- —T— TELEPHONE
- —OH— OVERHEAD WIRES
- —G— GAS
- —SAN— SANITARY UTILITY
- —SS— STORM SEWER UTILITY
- —C/L— CENTERLINE
- CONIFEROUS TREE
- DECIDUOUS TREE

NORTH

0 30 60
DRAWING SCALE

MENASHA LOCK ELECTRIC FISH BARRIER
FOX RIVER NAVIGATIONAL SYSTEMS AUTHORITY
1800 AUGUSTINE ST. KAUKAUNA, WI 54130

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION
1	3/13/19	60% PLANS

SHEET DESCRIPTION

GRADING AND UTILITY PLAN

PROJECT MANAGER: RDG
PROJ NO: E2344
DATE: 11/14/18

DRAWING NO.

C-200

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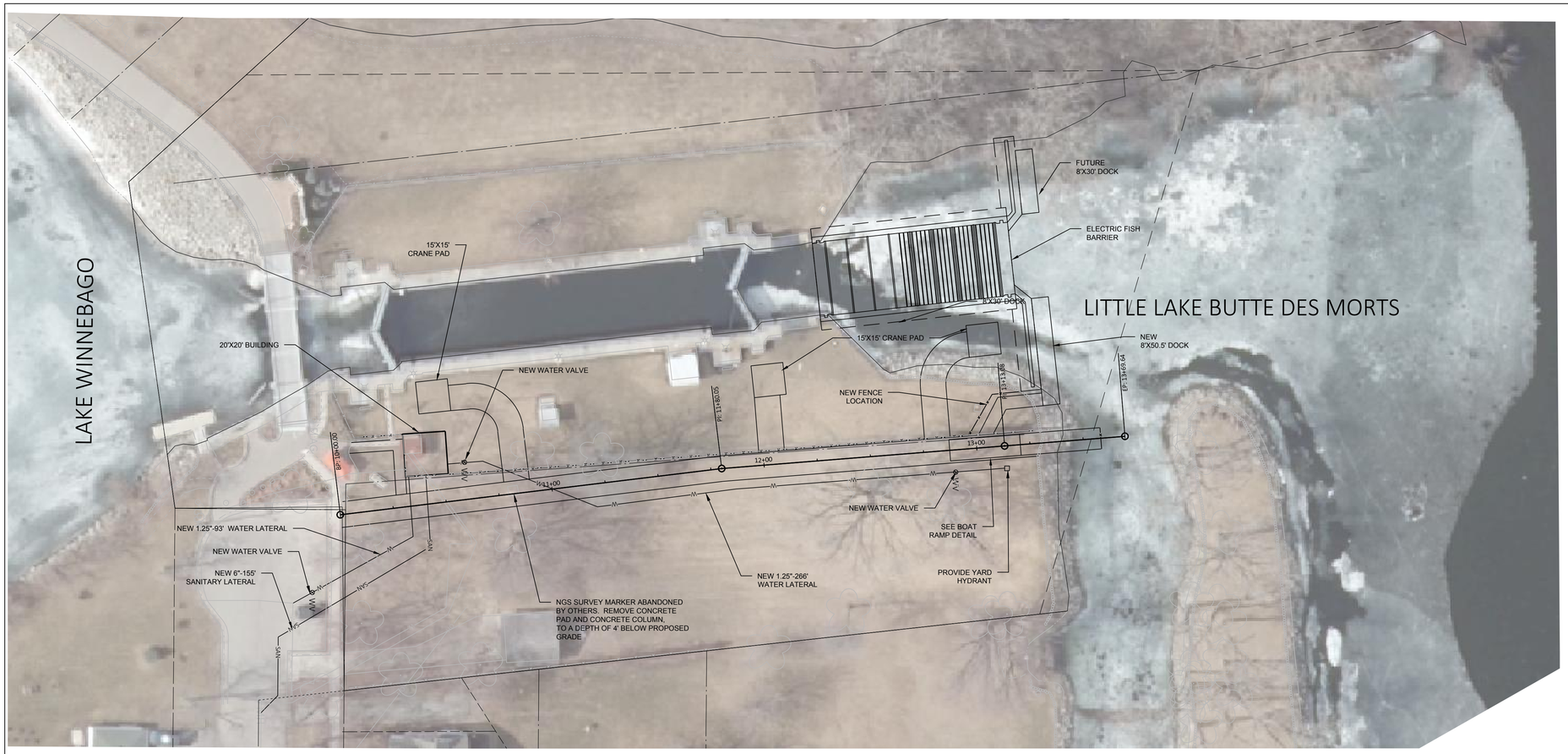

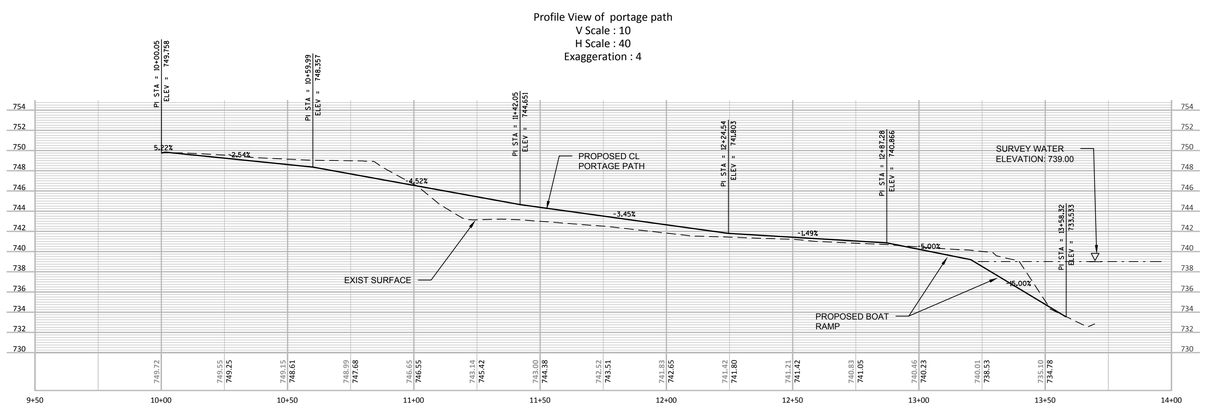

NORTH

0 30 60
DRAWING SCALE

MENASHA LOCK ELECTRIC FISH BARRIER
FOX RIVER NAVIGATIONAL SYSTEMS AUTHORITY
1800 AUGUSTINE ST. KAUKAUNA, WI 54130

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION
1	3/13/19	60% PLANS

SHEET DESCRIPTION

PLAN AND PROFILE

PROJECT MANAGER: RDG
PROJ NO: E2344
DATE: 11/14/18

DRAWING NO.

C-210

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File Name: F:\TRJOBS\E2344A18 Menasha Lock\Civil 3D 2016\SheetsPlan\C101.dwg
Plotted By: STODDARJ on 03/14/2019 at 08:44 AM

LEGEND

- H.D. ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- INLET PROTECTION
- SILT FENCE

CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE
2. INSTALL TEMPORARY TRACKING PAD.
3. INSTALL INLET PROTECTION
4. REMOVE UNSUITABLE MATERIAL.
5. FILL/GRADE THE SITE.
6. INSTALL UTILITIES.
7. INSTALL ELECTRIC FISH BARRIER
8. INSTALL PAVEMENT, AND BOAT LAUNCH
9. TOPSOIL, SEED & MULCH TURF AREAS.
10. REMOVE TRACKING PAD, SILT FENCE, AND INLET PROTECTION.
11. RESEED AND MULCH AS NEEDED TO FINISH LAWNS.
12. CLOSEOUT PROJECT.

NORTH

0 30 60
DRAWING SCALE

MENASHA LOCK ELECTRIC FISH BARRIER
FOX RIVER NAVIGATIONAL SYSTEMS AUTHORITY
1800 AUGUSTINE ST. KAUKAUNA, WI 54130

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION
1	3/13/19	60% PLANS

SHEET DESCRIPTION

PAVEMENT AND EROSION CONTROL PLAN

PROJECT MANAGER: RDG
PROJ NO: E2344
DATE: 11/14/18

DRAWING NO.

C-220

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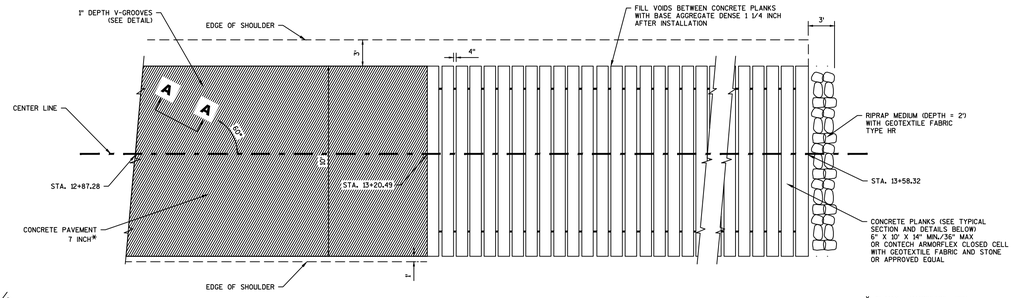
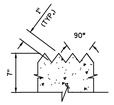


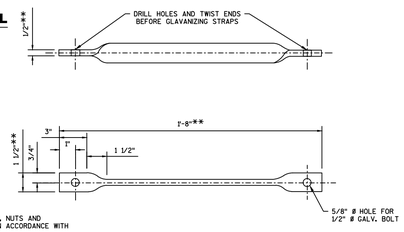
PLAN VIEW

* 8' MAX. TRANSVERSE JOINT SPACING



SECTION A - A

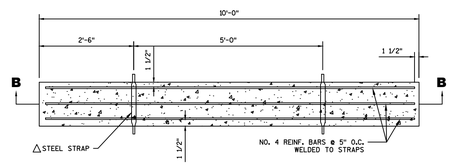
V-GROOVE DETAIL



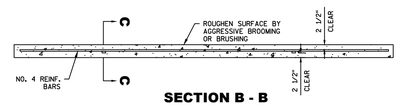
NOTE: ALL METAL STRAPS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. OR STAINLESS STEEL △GALVANIZED OR STAINLESS STEEL CABLE OR ALTERNATIVE STRAP CONFIGURATION CAN BE USED AS ALTERNATIVES.

** SIZE ACCORDING TO PLANK WIDTH

STEEL STRAP CONNECTORS △



PLAN VIEW



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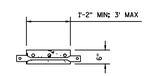
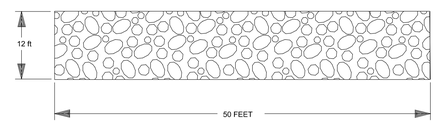


SECTION C - C

PRECAST REINFORCED CONCRETE PLANK

RAMP DETAILS

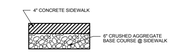


CLEAR OR WASHED ROCK (3"-6") BREAKER RUN MINIMUM THICKNESS 12" FOR CONSTRUCTION ACCESS.

THE GRAVEL ACCESS SHALL BE INSPECTED DAILY. AREAS NOT MEETING THE DESIGN CRITERIA AND REQUIREMENTS SHALL BE REPAIRED/REPLACED IMMEDIATELY

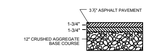
STABILIZED CONSTRUCTION ACCESS/TRACKING PAD

NOT TO SCALE



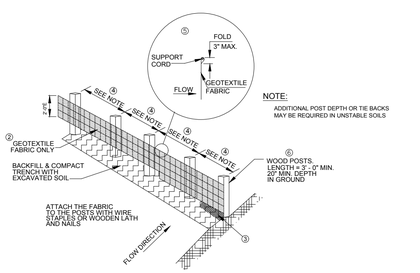
SIDEWALK SECTION

NOT TO SCALE



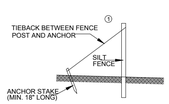
HEAVY DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE

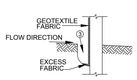


NOTE:

ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)



TRENCH DETAIL

GENERAL NOTES

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE. WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

① CROSS BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER OR OWNER.

② THE GEOTEXTILE FABRIC CONSISTS OF EITHER WOVEN OR NON-WOVEN POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLEN, OR POLYVINYLIDENE CHLORIDE. NON-WOVEN FABRIC MAY BE NEEDLE PUNCHED, HEAT BONDED, RESIN BONDED, OR COMBINATIONS THEREOF. ALL FABRICS SHALL MEET WISDOT STAND SPECIFICATIONS.

③ SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8" OF THE FABRIC IN A 4" WIDE BY 6" DEEP TRENCH, OR 6" DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

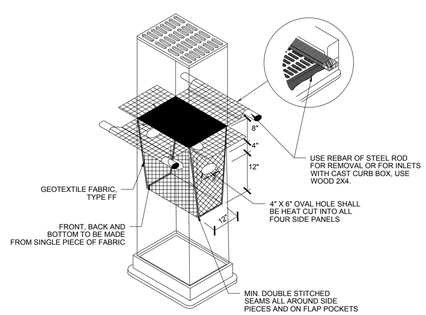
④ THE MAXIMUM SPACING OF POSTS FOR NON-WOVEN SILT FENCE SHALL BE 3' AND FOR WOVEN FABRIC 8'.

⑤ GEOTEXTILE FABRIC SHALL BE REINFORCED WITH A HEAVY DUTY NYLON TOP SUPPORT CORD.

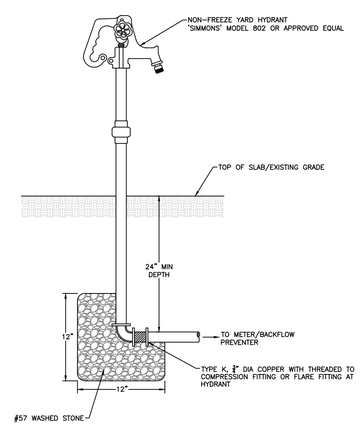
⑥ THE FULL HEIGHT OF THE SILT FENCE SHALL BE SUPPORTED BY 1 ¼" x 1 ¼" AIR OR KILN DRIED POSTS OF HICKORY OR OAK. THE SILT FENCE FABRIC SHALL BE STAPLED, USING AT LEAST 0.5" STAPLES, TO THE UPSLOPE SIDE OF THE POSTS IN AT LEAST 3 PLACES. THE POSTS SHALL BE A MINIMUM OF 3' LONG FOR 24" SILT FENCE AND A MINIMUM OF 4' LONG FOR 36" SILT FENCE FABRIC.

SILT FENCE DETAIL

NOT TO SCALE



TYPE "D" INLET PROTECTION



YARD HYDRANT

NORTH

0 0 0

DRAWING SCALE

MENASHA LOCK ELECRTIC FISH BARRIER
FOX RIVER NAVIGATIONAL SYSTEMS AUTHORITY
1800 AUGUSTINE STONE ST. KAUKAUNA, WI 54130

OMNNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION
1	3/13/19	60% PLANS

SHEET DESCRIPTION

DETAILS

PROJECT MANAGER: RDG

PROJ NO: E2344

DATE: 11/14/18

DRAWING NO.

C-230

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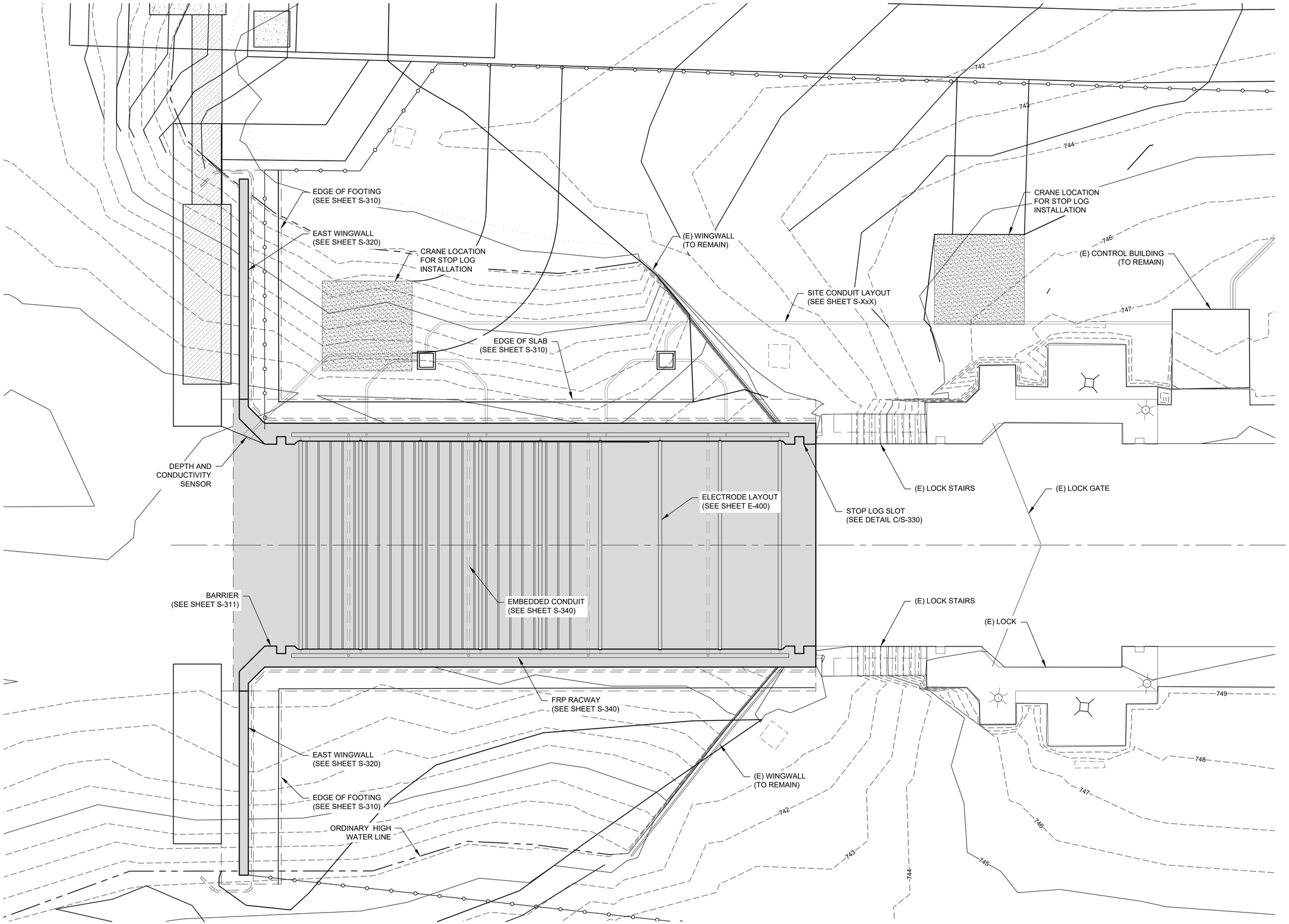


PROPOSED GENERAL BARRIER LAYOUT

SEE BAR SCALE

0" 4'-0" 8'-0" 16'-0"

SCALE: 1/8" = 1'-0"

APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

DRAFT SET NOT FOR CONSTRUCTION
Print Date:
3/14/2019 7:31:37 AM

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

ISSUE DATE	03/14/2019
ENGINEER	MBD
Q.C. CHECK	JK
DESIGNER	SLMc
JOB NUMBER	

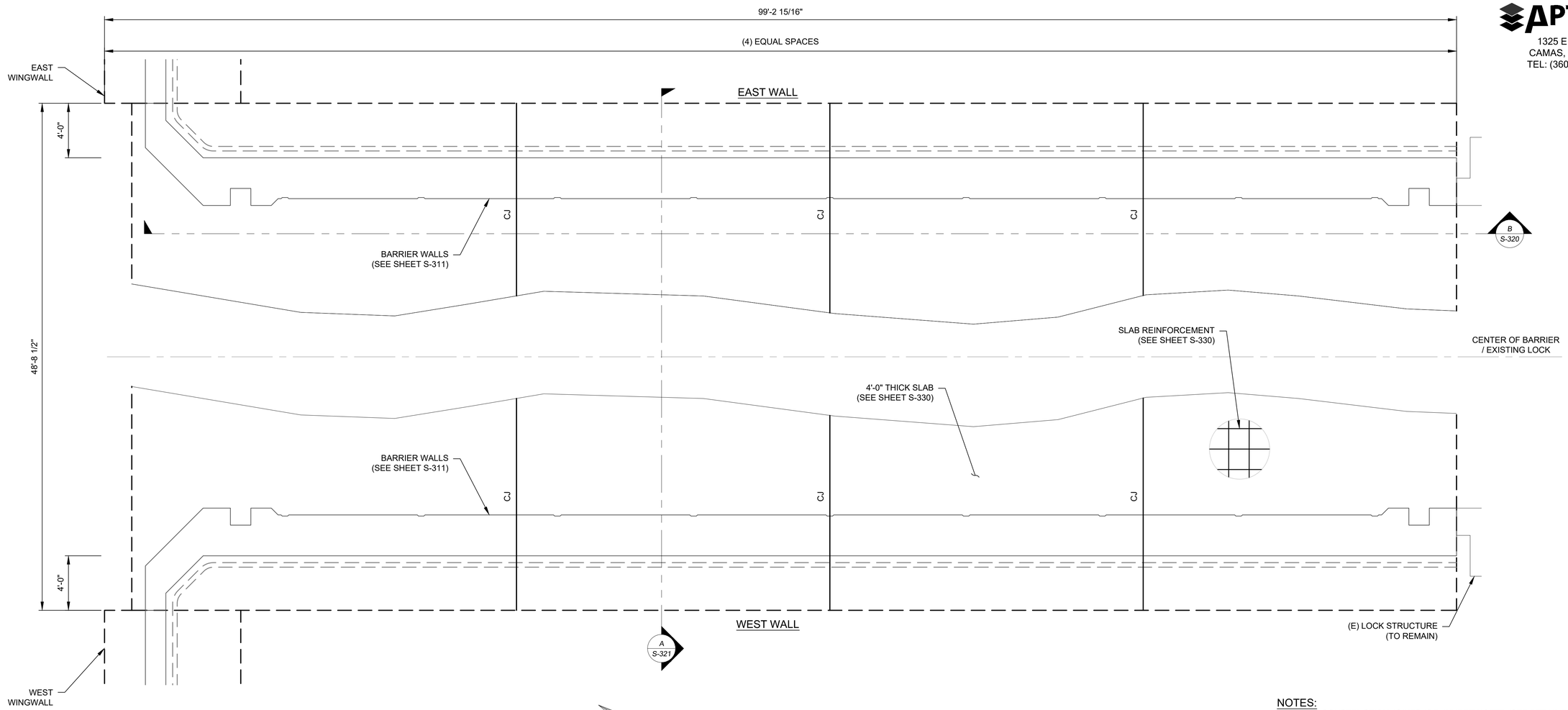
CLIENT
FOX RIVER NAVIGATIONAL
SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
PROPOSED GENERAL
BARRIER LAYOUT

S-300

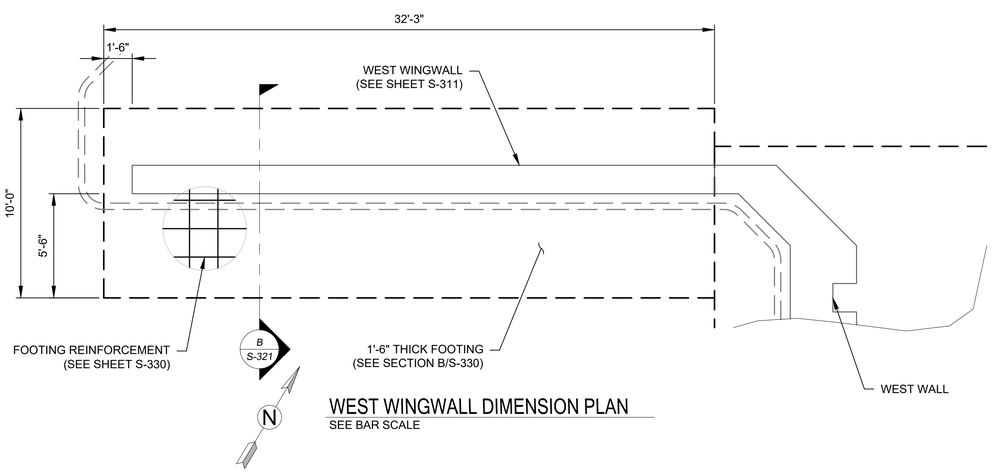
P:\0045-003_SR_MENASHALOCK\04_CAD\SHEETS\S-300 PROPOSED GENERAL BARRIER LAYOUT.DWG



SLAB DIMENSION PLAN

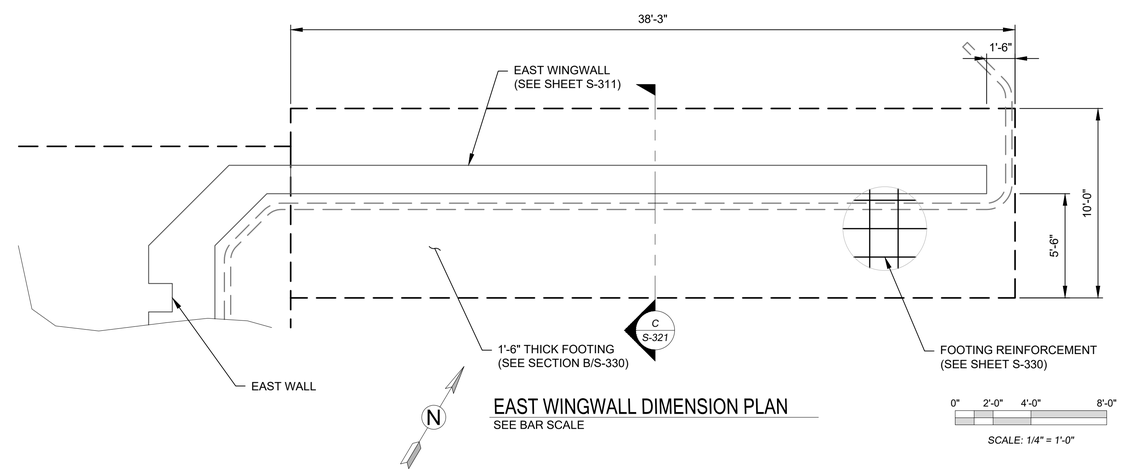
SEE BAR SCALE

NOTES:
OPTIONAL CONSTRUCTION JOINTS (CJ), WHERE NOTED (SEE DETAIL D/S-330).



WEST WINGWALL DIMENSION PLAN

SEE BAR SCALE



EAST WINGWALL DIMENSION PLAN

SEE BAR SCALE

0" 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

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(360) 573-0202

REVISION

ISSUE DATE 03/14/2019
ENGINEER MBD
Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

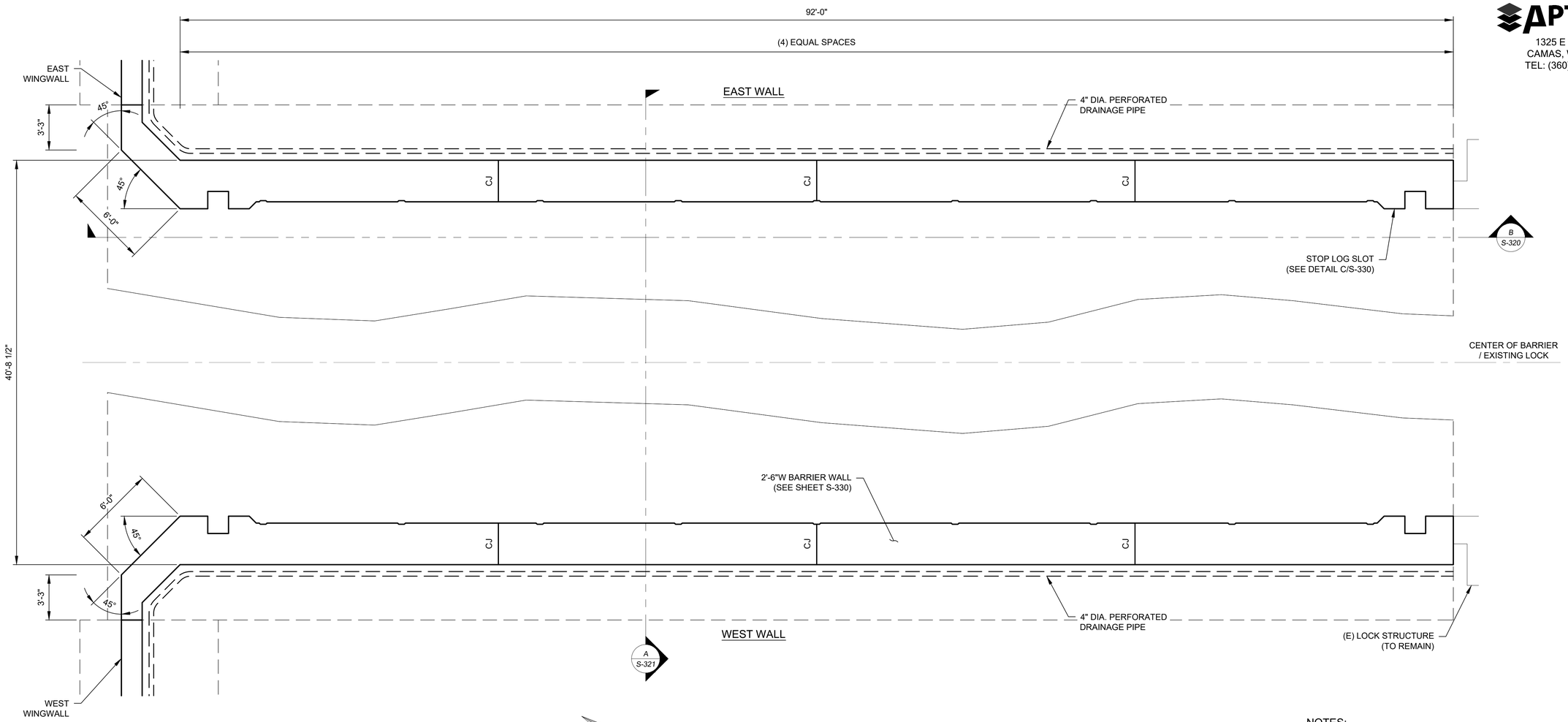
CLIENT
FOX RIVER NAVIGATIONAL SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
BARRIER SLAB & FOOTING DIMENSION PLAN

S-310

P:\0045-003_SRI_MENASHALOCK\04_CAD\SHEETS\S-310 FOOTING DIMENSION PLAN.DWG

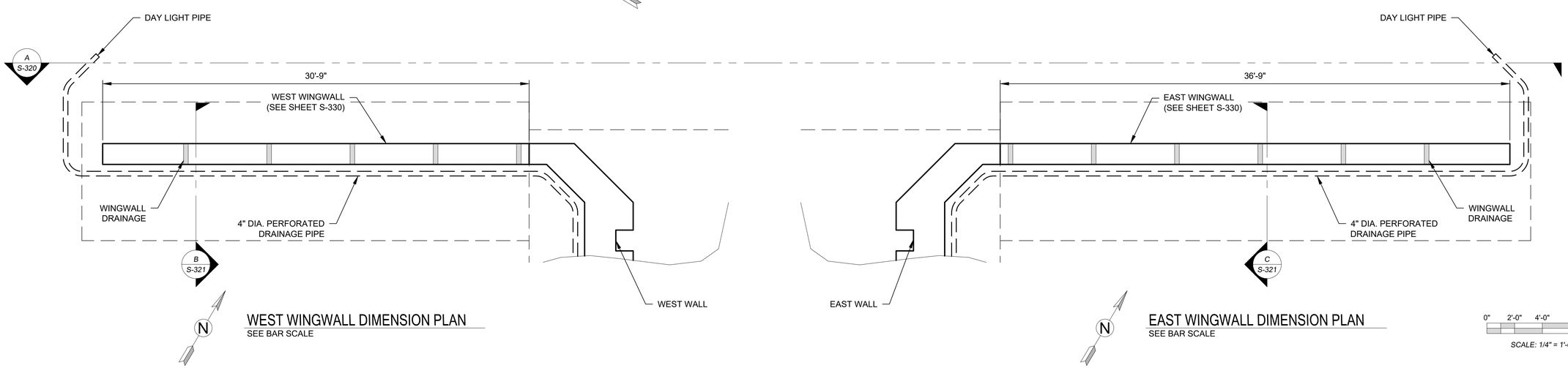


WALL DIMENSION PLAN

SEE BAR SCALE

NOTES:

OPTIONAL CONSTRUCTION JOINTS (CJ), WHERE NOTED (SEE DETAIL D/S-330).



WEST WINGWALL DIMENSION PLAN

SEE BAR SCALE

EAST WINGWALL DIMENSION PLAN

SEE BAR SCALE

0" 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

APTUM
1325 E 1st AVE
CAMAS, WA 98607
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VANCOUVER, WA. 98686
(360) 573-0202

REVISION

ISSUE DATE 03/14/2019
ENGINEER MBD
Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

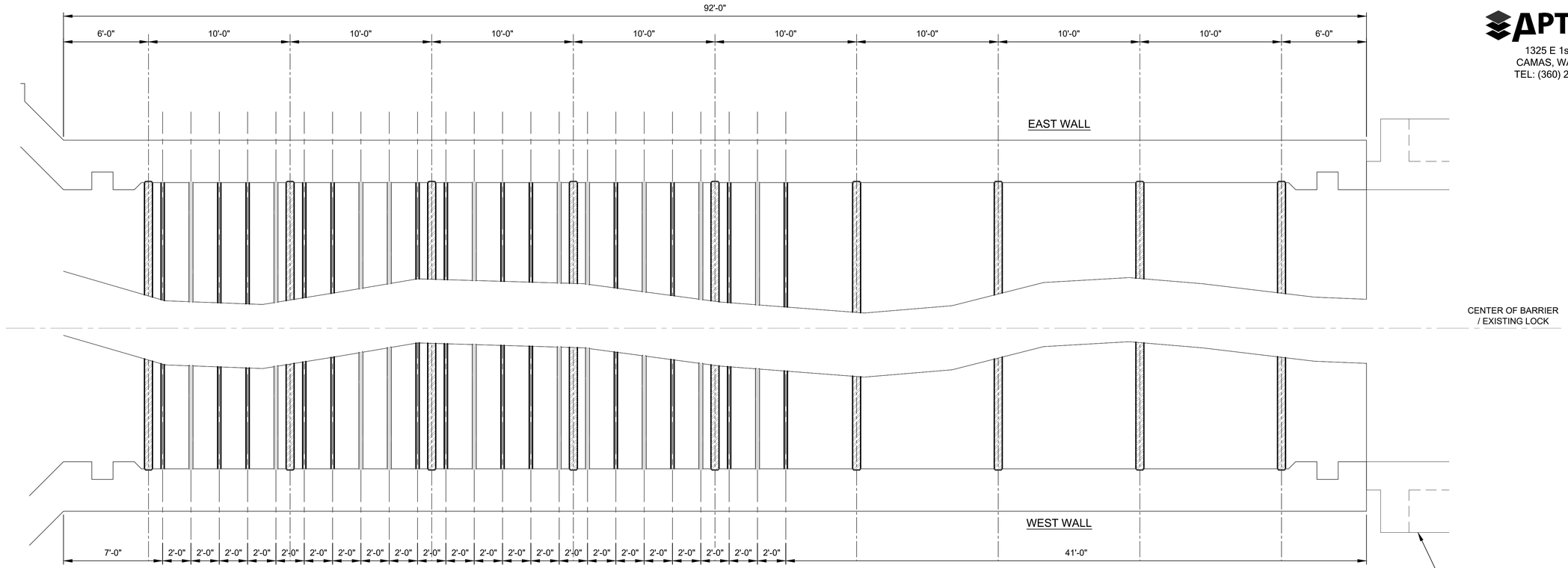
CLIENT
FOX RIVER NAVIGATIONAL SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
BARRIER WALLS DIMENSION PLAN

S-311

P:\0045-005_SRI_MENASHALOCK\04_CAD\SHEETS\S-311 WALL DIMENSION PLAN.DWG



LEGEND:

1"x2" ELECTRODE SLOT, 23 TOTAL (SEE DETAIL A/S-312)

FUTURE 1"x4" ELECTRODE SLOT, 9 TOTAL (SEE DETAIL B/S-312)

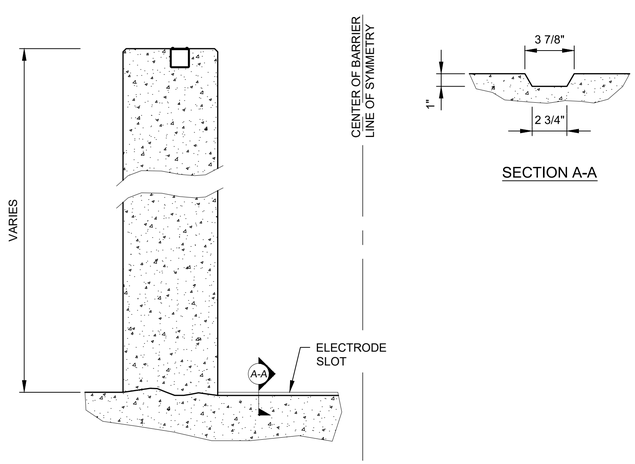
0" 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

N

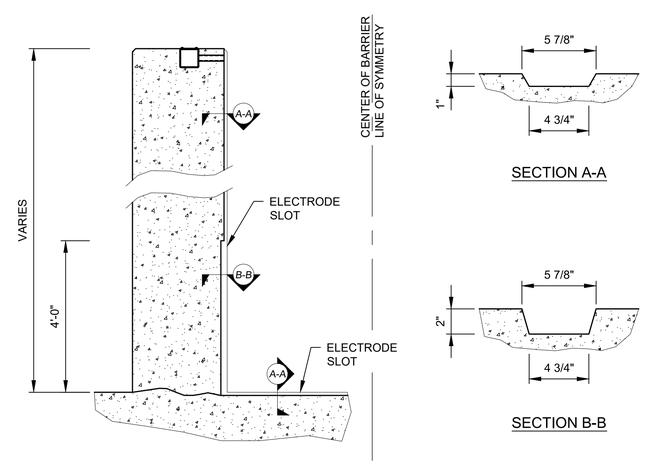
SLOTS DIMENSION PLAN

SEE BAR SCALE



A 1"x2" ELECTRODE SLOT DETAIL

NOT TO SCALE



B 1"x4" ELECTRODE SLOT DETAIL

NOT TO SCALE

APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

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VANCOUVER, WA. 98686
(360) 573-0202

REVISION

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Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

CLIENT
FOX RIVER NAVIGATIONAL
SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
BARRIER SLOTS
DIMENSION PLAN

S-312

P:\0046-005_SRI_MENASHALOCK\04_CAD\SHEETS\S-312 ELECTRODE SLOT.DWG

APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

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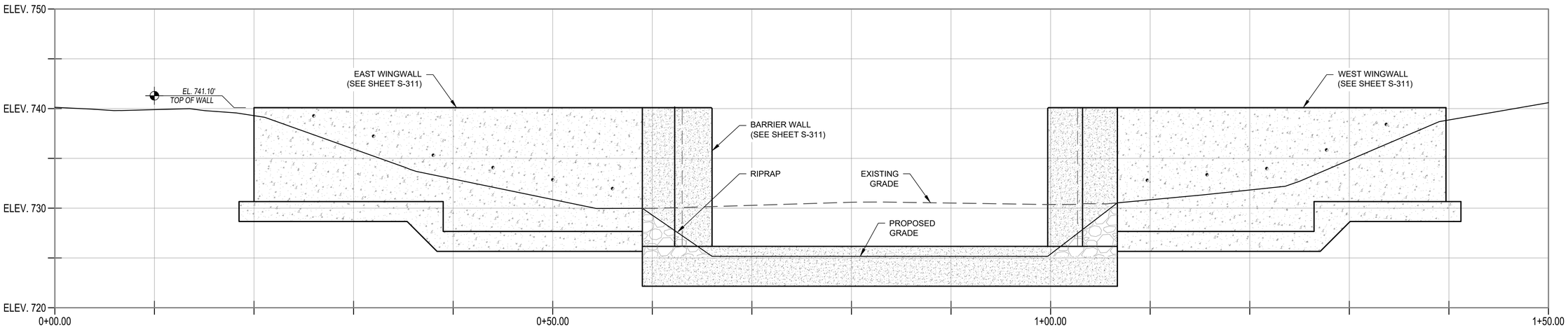
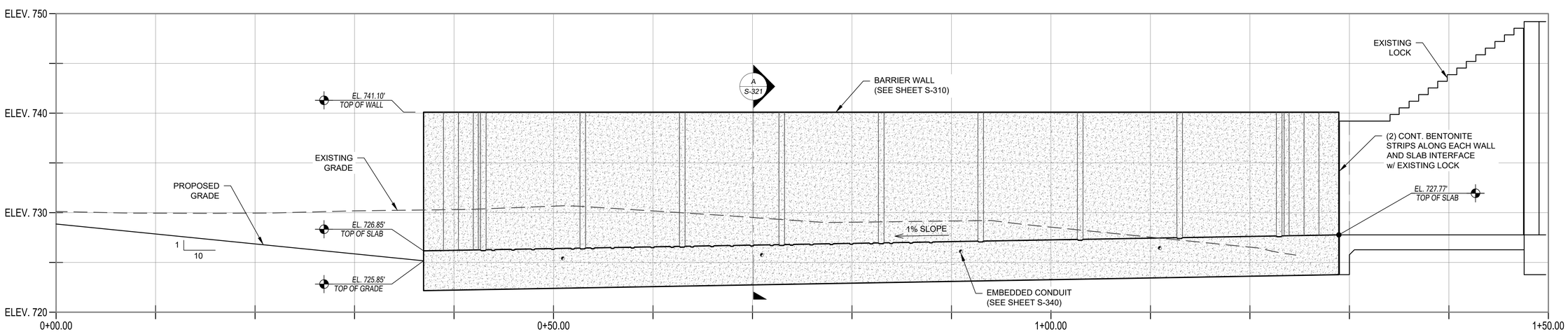


A DOWNSTEAM SECTION
SEE BAR SCALE

NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.



B BARRIER PROFILE
SEE BAR SCALE

NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

0" 3'-0" 6'-0" 9'-0"
SCALE: 3/16" = 1'-0"

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

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Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

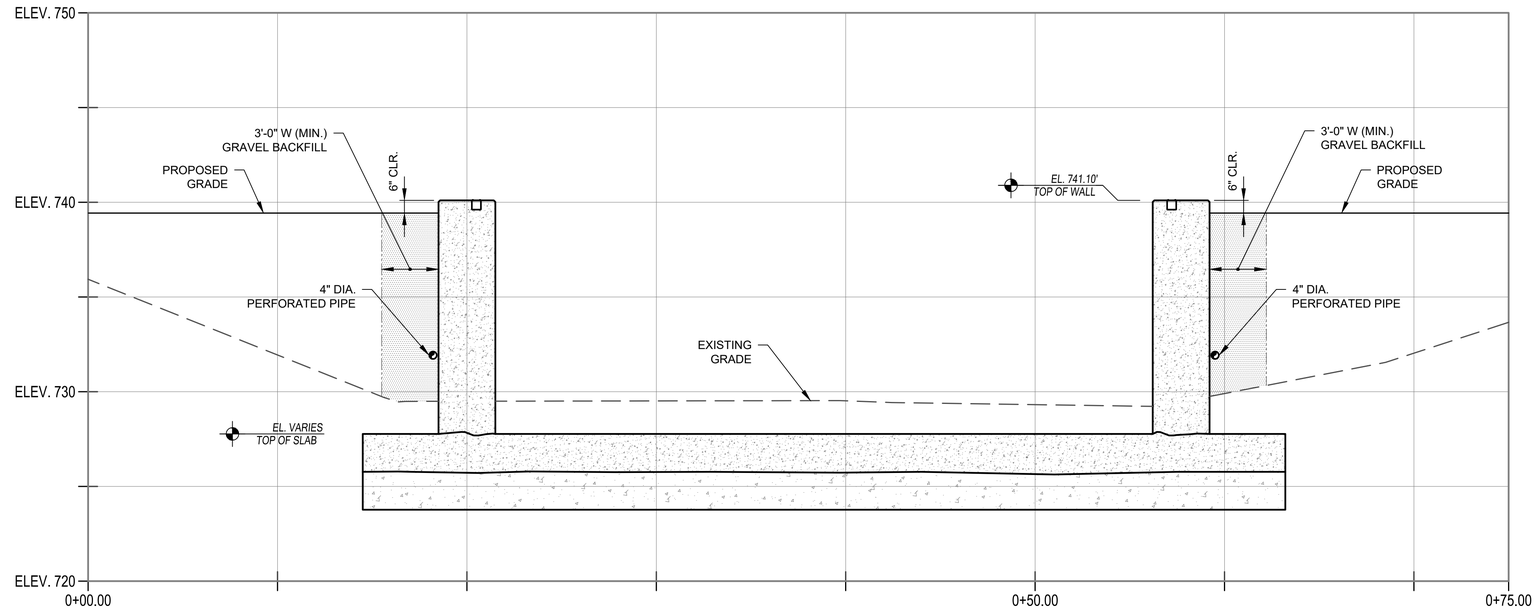
CLIENT
FOX RIVER NAVIGATIONAL
SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
BARRIER PROFILE
& CROSS SECTIONS

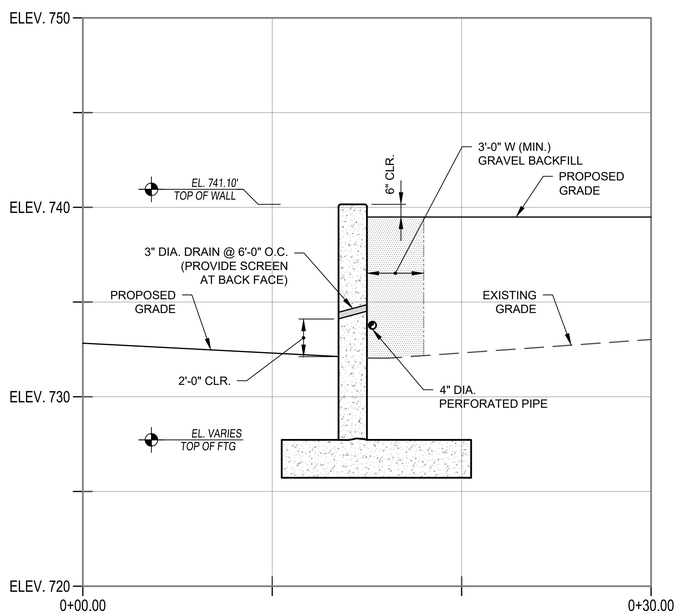
S-320

P:\0045-003_SRI_MENASHALOCK\04_CAD\SHEETS\S-320 S-321 BARRIER CROSS SECTIONS.DWG



NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

A FISH BARRIER SECTION
SEE BAR SCALE



NOTE:
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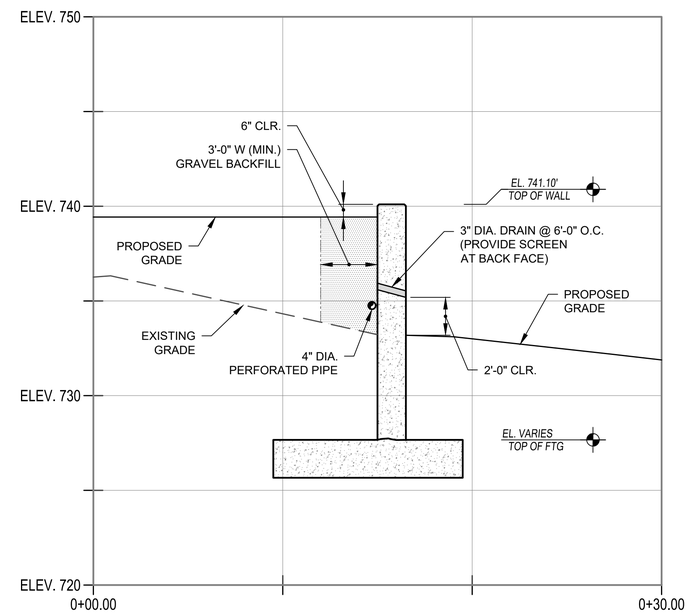
B WEST WINGWALL SECTION
SEE BAR SCALE



NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

C EAST WINGWALL SECTION
SEE BAR SCALE

0" 2'-0" 4'-0" 8'-0"
SCALE: 1/4" = 1'-0"

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CAMAS, WA 98607
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(360) 573-0202

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Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

CLIENT
FOX RIVER NAVIGATIONAL
SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
BARRIER PROFILE
& CROSS SECTIONS

S-321

P:\0045-003_SR_MENASHALOCK04_CAD\SHEETS\S-320 S-321 BARRIER CROSS SECTIONS.DWG

APTUM
1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

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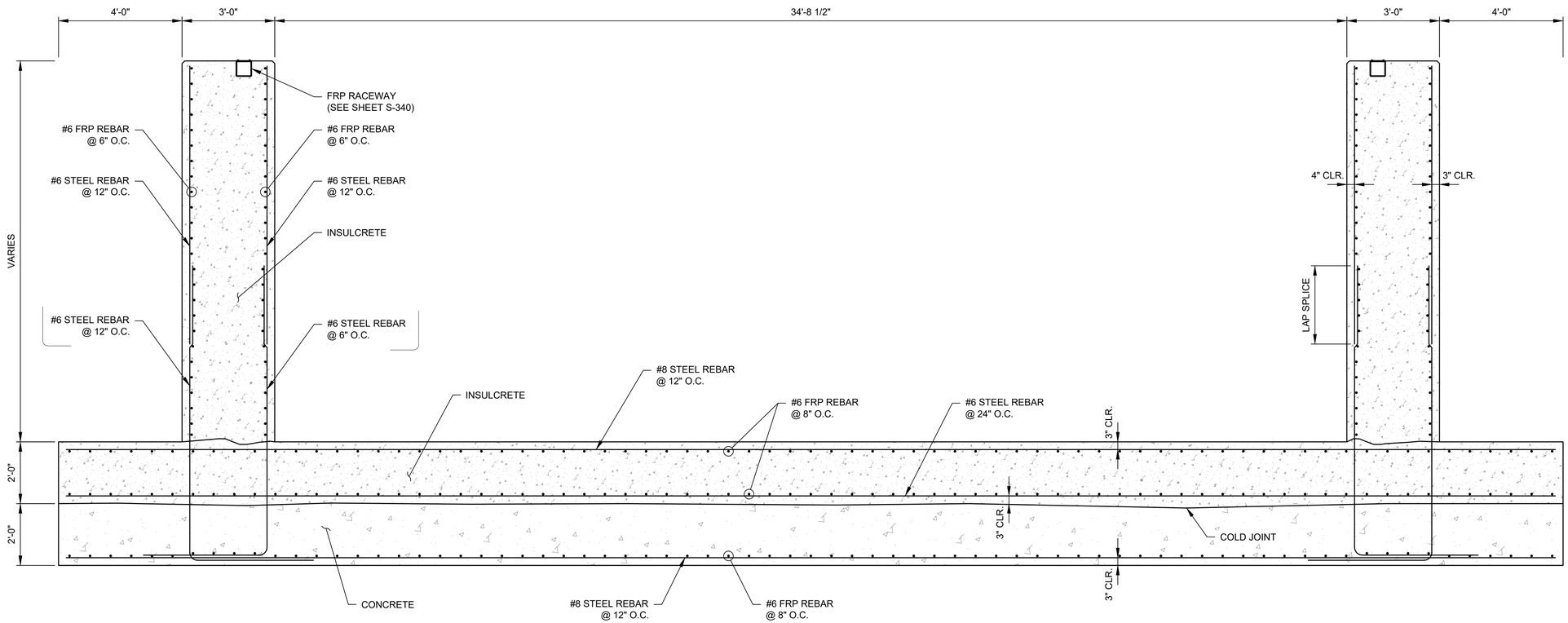
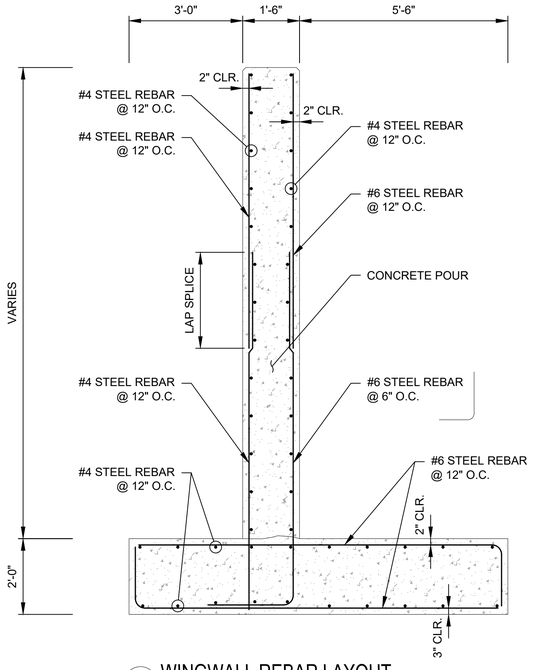
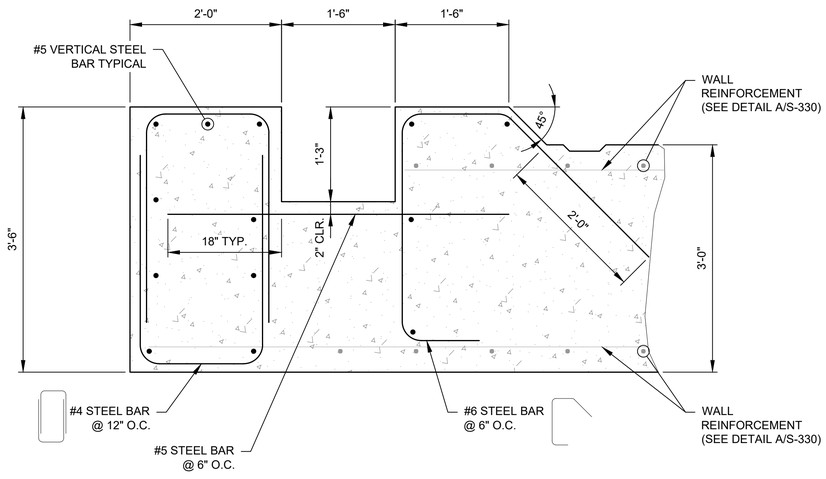


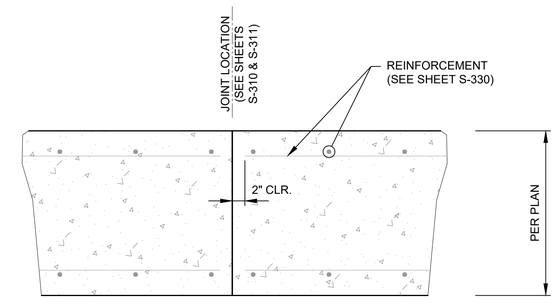
A FISH BARRIER REBAR LAYOUT
NOT TO SCALE



B WINGWALL REBAR LAYOUT
NOT TO SCALE



C STOP LOG SLOT REBAR LAYOUT
NOT TO SCALE



D CONSTRUCTION JOINT DETAIL
NOT TO SCALE

SMITH-ROOT
16603 NE 50th AVE.
VANCOUVER, WA. 98686
(360) 573-0202

REVISION

ISSUE DATE 03/14/2019
ENGINEER MBD
Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

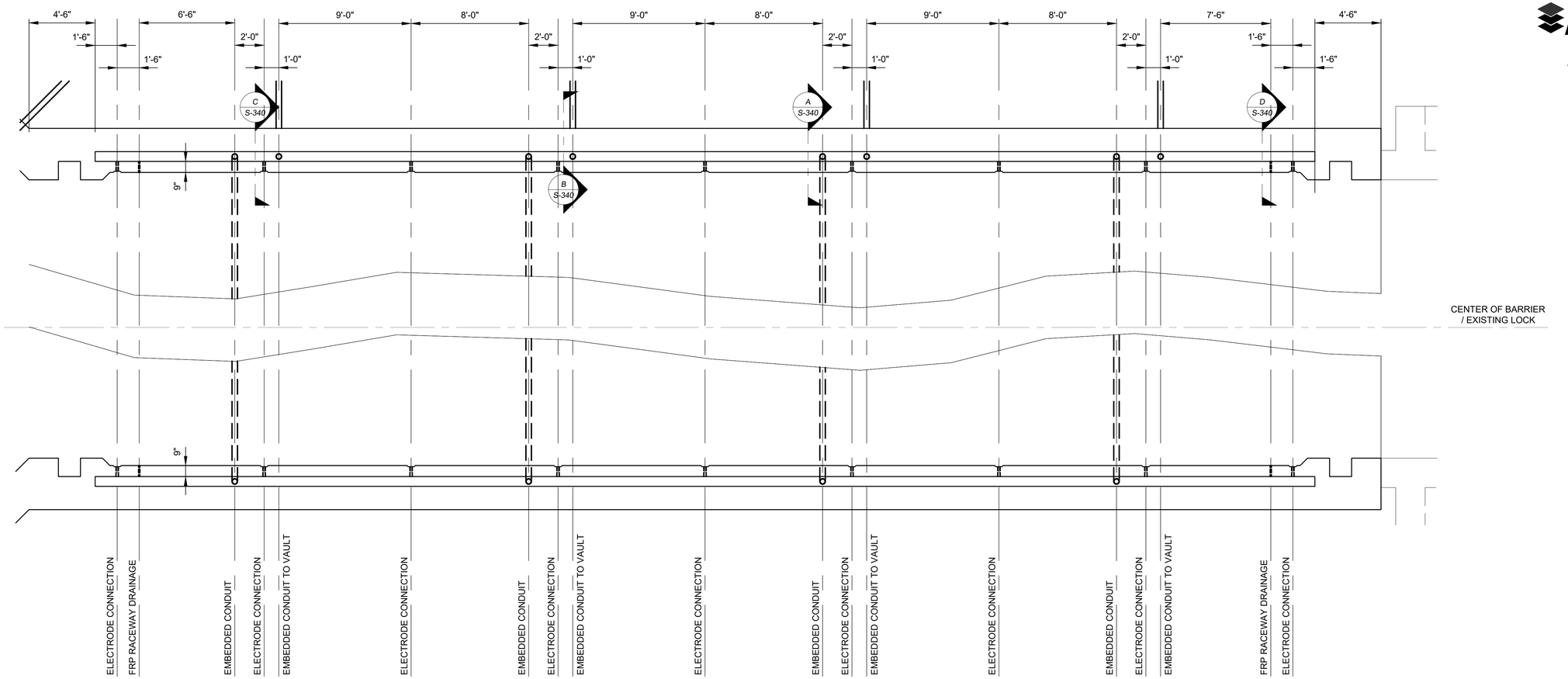
CLIENT
FOX RIVER NAVIGATIONAL
SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
REBAR LAYOUT

S-330

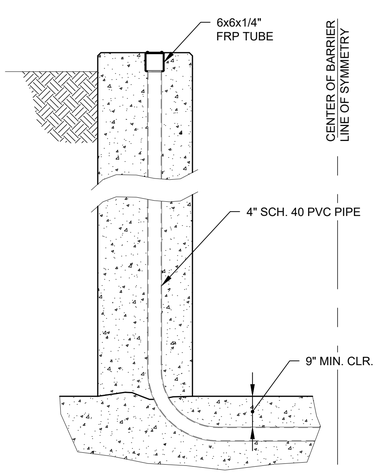
P:\2045-003_SRI_MENASHALOCK\04_CAD\SHEETS\S-330-REBAR LAYOUT.DWG



FRP RACEWAY & EMBEDDED CONDUIT LAYOUT

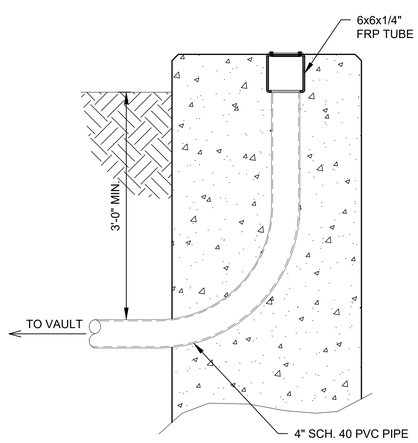
SEE BAR SCALE

SCALE: 1/4" = 1'-0"



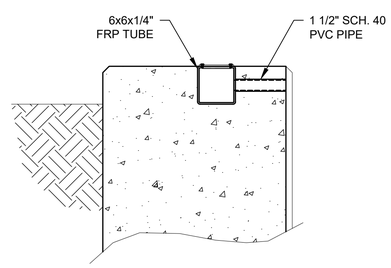
A EMBEDDED CONDUIT DETAIL

NOT TO SCALE



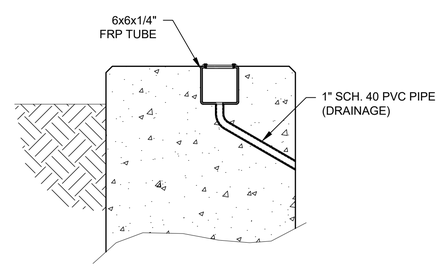
B EMBEDDED CONDUIT FROM FRP RACEWAY TO VAULT

NOT TO SCALE



C FRP RACEWAY TO ELECTRODE CONNECTION

NOT TO SCALE



D FRP RACEWAY DRAINAGE

NOT TO SCALE

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1325 E 1st AVE
CAMAS, WA 98607
TEL: (360) 216-4086

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VANCOUVER, WA. 98686
(360) 573-0202

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Q.C. CHECK JK
DESIGNER SLMc
JOB NUMBER

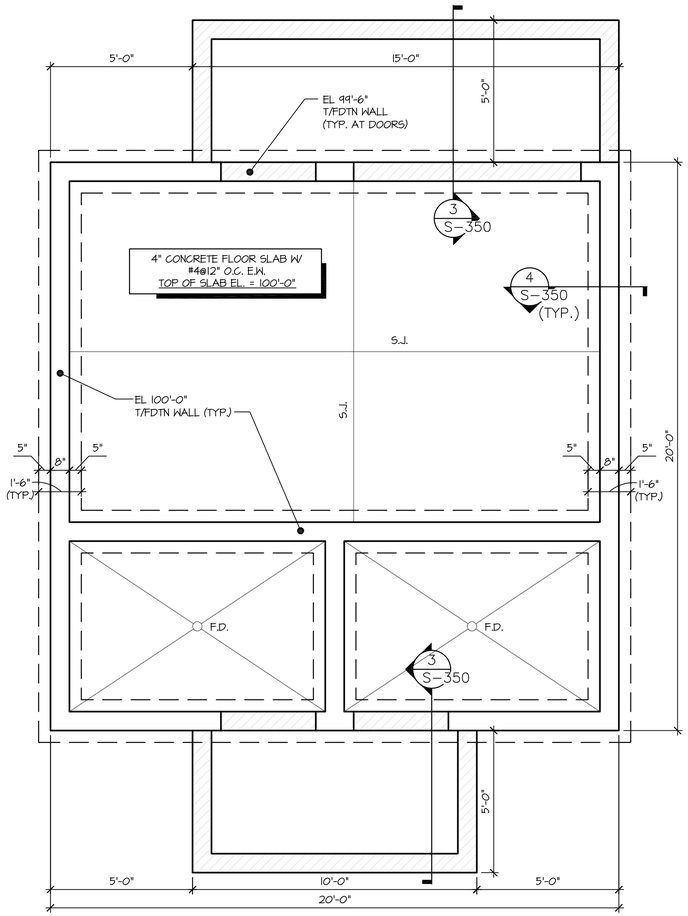
CLIENT
FOX RIVER NAVIGATIONAL SYSTEM AUTHORITY
1008 AUGUSTINE ST
KAUKAUNA, WI 54130

PROJECT
60% DESIGN
MENASHA LOCK ELECTRIC BARRIER
MENASHA, WI 54952

TITLE
FRP RACEWAY & EMBEDDED CONDUIT LAYOUT & DETAILS

S-340

P:\0045-003_SRI_MENASHALOCK\04_CAD\SHEETS\S-340 FRP RACEWAY.DWG



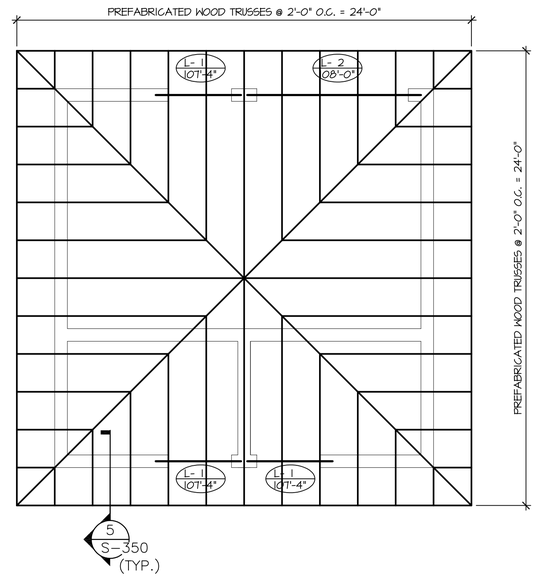
FOUNDATION PLAN

SCALE: 3/8"=1'-0"

PLAN NORTH

NOTES:

1. NOM. FINISHED FLOOR EL 100'-0" = EL XXX.XX'
2. FOR TYPICAL FOUNDATION DETAILS SEE DETAILS 1 & 2/S-350.
3. "S.J." - INDICATES SAW JOINTS. SEE DETAIL X/S-350.
4. COORDINATE ALL FLOOR PENETRATIONS WITH PLUMBING CONTRACTOR.



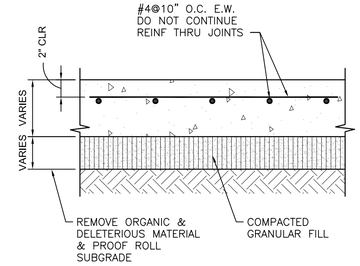
ROOF FRAMING PLAN

SCALE: 3/8"=1'-0"

PLAN NORTH

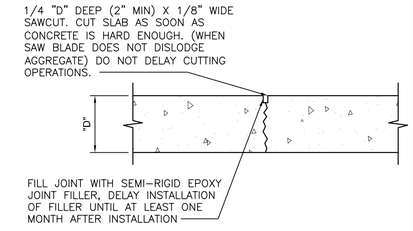
NOTES:

1. INSTALL 8" CMU WALLS TO BE REINFORCED WITH #4@48" O.C. AND AT ALL CORNERS IN GROUTED CELLS. T/WALL EL 104'-4".
2. "L-1" - INDICATES 8"X8" BOND BEAM WITH (2)-#4 BARS.
3. "L-2" - INDICATES 8"X16" BOND BEAM WITH (2)-#4 TOP & BOTTOM BARS.
4. BOTTOM NUMBER INDICATES UNDERSIDE OF LINTEL ELEVATION.



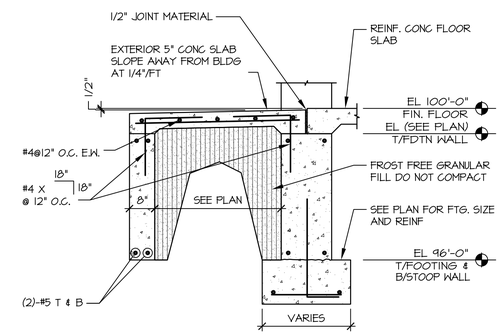
1 / S-350 Typ. Slab Constr. Detail

SCALE: N.T.S.



2 / S-350 Typ. Slab Saw Joint (SJ)

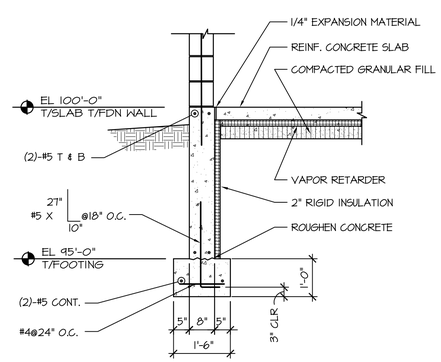
SCALE: N.T.S.



Typical Mandoor Stoop Detail

3 / S-350

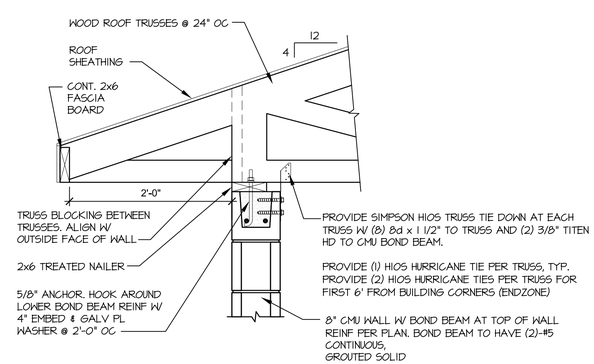
SCALE: 1/2"=1'-0"



Fdn. Wall/ Strip Footing

4 / S-350

SCALE: 1/2"=1'-0"



Typ. Truss Bearing Detail

5 / S-350

SCALE: 1"=1'-0"

PRELIMINARY
– 60% SET
NOT FOR FABRICATION
OR CONSTRUCTION

NORTH

DRAWING SCALE

MENASHA LOCK

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION

SHEET DESCRIPTION

NEW TOILET BLDG.
STRUCTURAL PLANS
& DETAILS

PROJECT MANAGER: BG
PROJ NO: E2344A18
DATE: 03/13/19

DRAWING NO.

S-350

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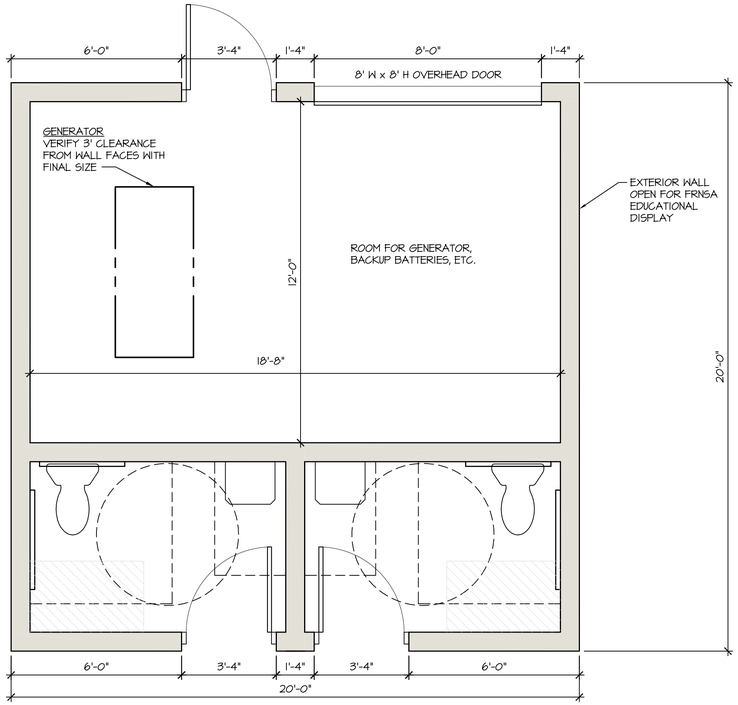
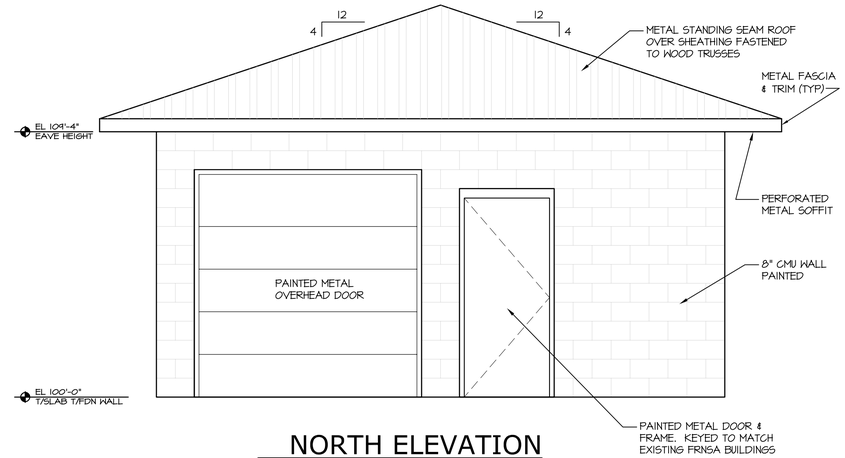


TOILET FACILITY PLAN

SCALE: 3/8"=1'-0"

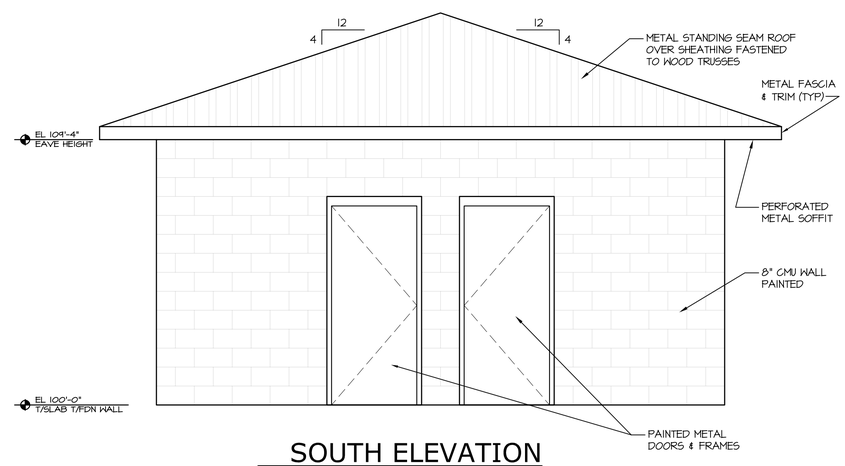
PLAN NORTH

NOTE:
1. HIP ROOF CONSTRUCTED OF WOOD TRUSSES, SHEATHING AND STANDING SEAM METAL ROOF PANELS.



NORTH ELEVATION

SCALE: 3/8"=1'-0"



SOUTH ELEVATION

SCALE: 3/8"=1'-0"

PRELIMINARY
– 60% SET
NOT FOR FABRICATION OR CONSTRUCTION

NORTH

DRAWING SCALE

MENASHA LOCK

OMNNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION

SHEET DESCRIPTION

NEW TOILET BUILDING PLAN & ELEVATIONS

PROJECT MANAGER: BG
PROJ NO: E2344A18
DATE: 03/13/19

DRAWING NO.

A-400

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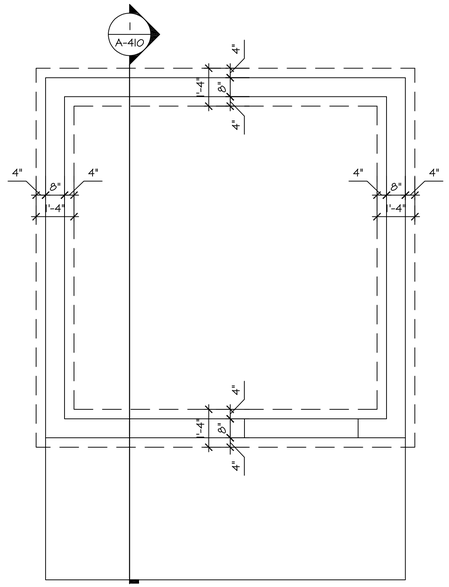
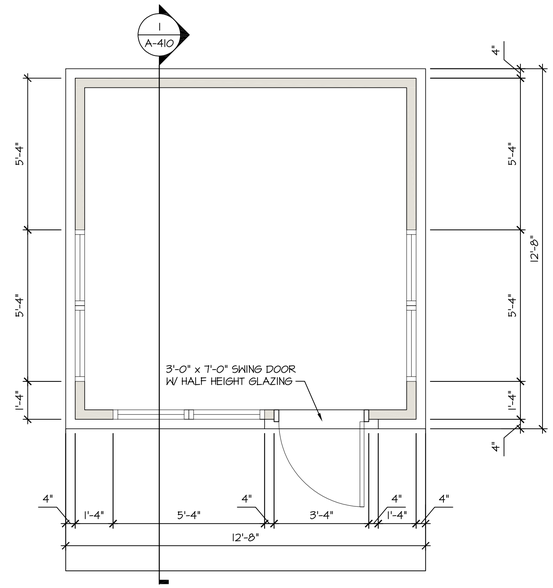


EXISTING FOUNDATION PLAN

SCALE: 3/8"=1'-0"

PLAN NORTH

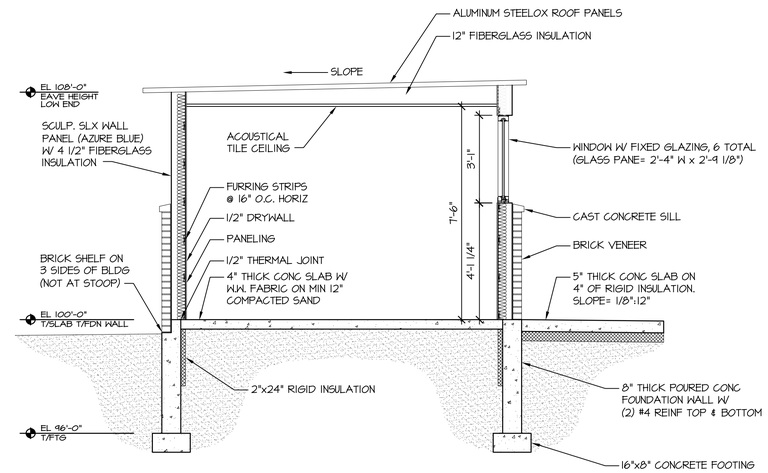
NOTE:
1. POURED CONCRETE FOUNDATION WALLS & FOOTINGS TO REMAIN.



EXISTING CONTROLS BUILDING PLAN

SCALE: 3/8"=1'-0"

PLAN NORTH



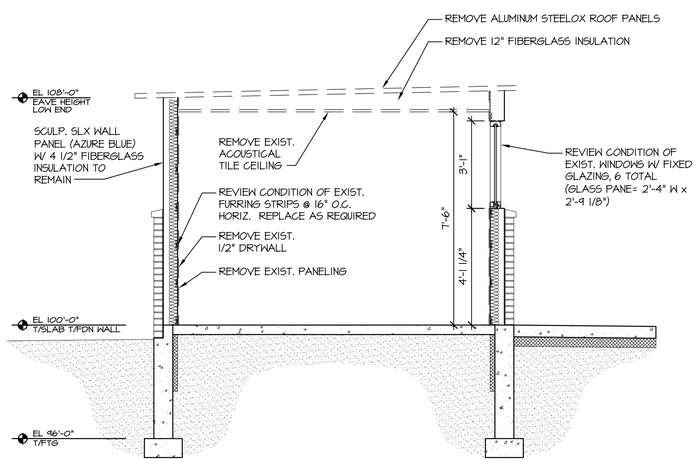
Existing Building Section

1 / A-410

SCALE: 3/8"=1'-0"

NOTE:
1. EXISTING BUILDING WALL CONSTRUCTION MAY VARY FROM WHAT IS SHOWN. TWO DIFFERENT CONTROL BUILDING EXISTING DRAWINGS WERE FOUND FOR MENASHA AND NEED TO BE CONFIRMED.

EXISTING WALL CONSTRUCTION & STATUS OF EXTERIOR BUILDING MATERIALS TO BE REVIEWED ON SITE PRIOR TO FINAL DESIGN

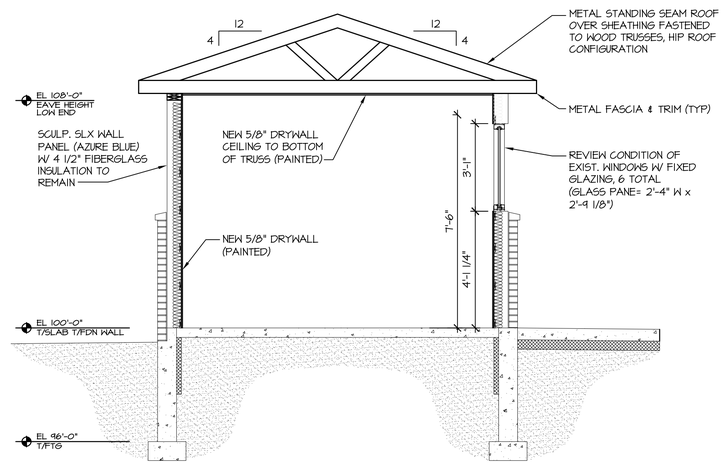


Proposed Demo - Building Section

2 / A-410

SCALE: 3/8"=1'-0"

NOTES:
1. EXISTING BUILDING WALL CONSTRUCTION MAY VARY FROM WHAT IS SHOWN. TWO DIFFERENT CONTROL BUILDING EXISTING DRAWINGS WERE FOUND FOR MENASHA AND NEED TO BE CONFIRMED.
2. PER DRAWINGS EXISTING CONTROLS BUILDING WAS CONSTRUCTED IN 1978. BASED ON THIS DATE, HAZARDOUS MATERIALS (ASBESTOS, LEAD, ETC.) ARE NOT ANTICIPATED. IF CONTRACTOR SUSPECTS ANY BUILDING MATERIALS CONTAIN HAZARDOUS MATERIALS CONTACT OWNER AND ENGINEER PRIOR TO PROCEEDING WITH DEMO WORK.



Proposed Alterations - Building Section

3 / A-410

SCALE: 3/8"=1'-0"

NOTE:
1. EXISTING BUILDING WALL CONSTRUCTION MAY VARY FROM WHAT IS SHOWN. TWO DIFFERENT CONTROL BUILDING EXISTING DRAWINGS WERE FOUND FOR MENASHA AND NEED TO BE CONFIRMED.
2. ANY EXTERIOR SIDING, WINDOWS OR DOOR REPLACEMENTS SHALL MATCH STYLE AND FINISH OF EXISTING.

PRELIMINARY
– 60% SET
NOT FOR FABRICATION
OR CONSTRUCTION

NORTH

DRAWING SCALE

MENASHA LOCK

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
(920) 735-6900

REV.	DATE	DESCRIPTION

SHEET DESCRIPTION

EXISTING CONTROL BUILDING PLAN & DETAILS

PROJECT MANAGER: BG
PROJ NO: E2344A18
DATE: 03/13/19

DRAWING NO.

A-410

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